FREIGHT TRAFFIC: MARKETING—AS SHIPPERS SEE IT

November 27, 1972

RAILWAY AGE

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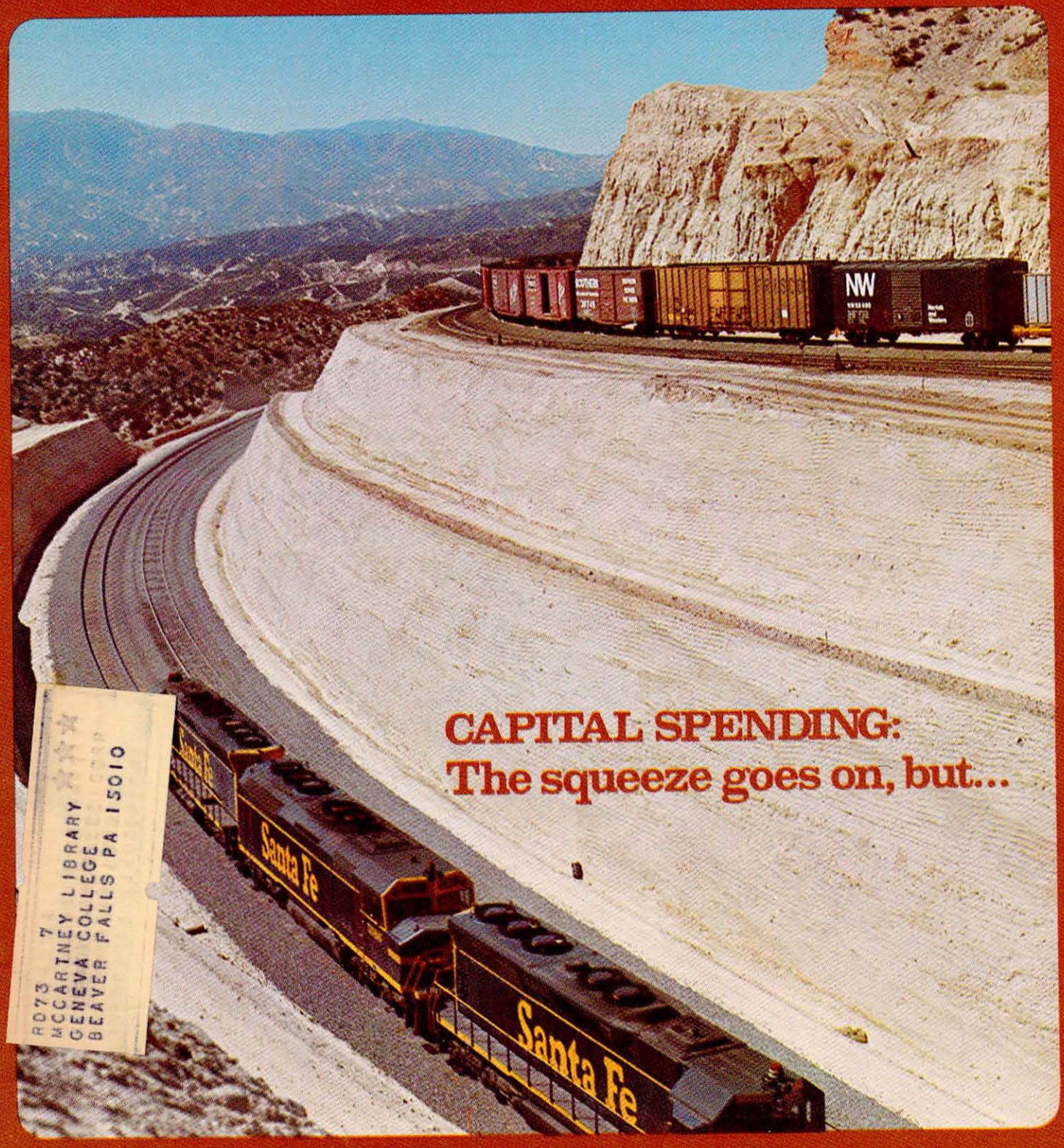

CAPITAL SPENDING: The squeeze goes on, but...

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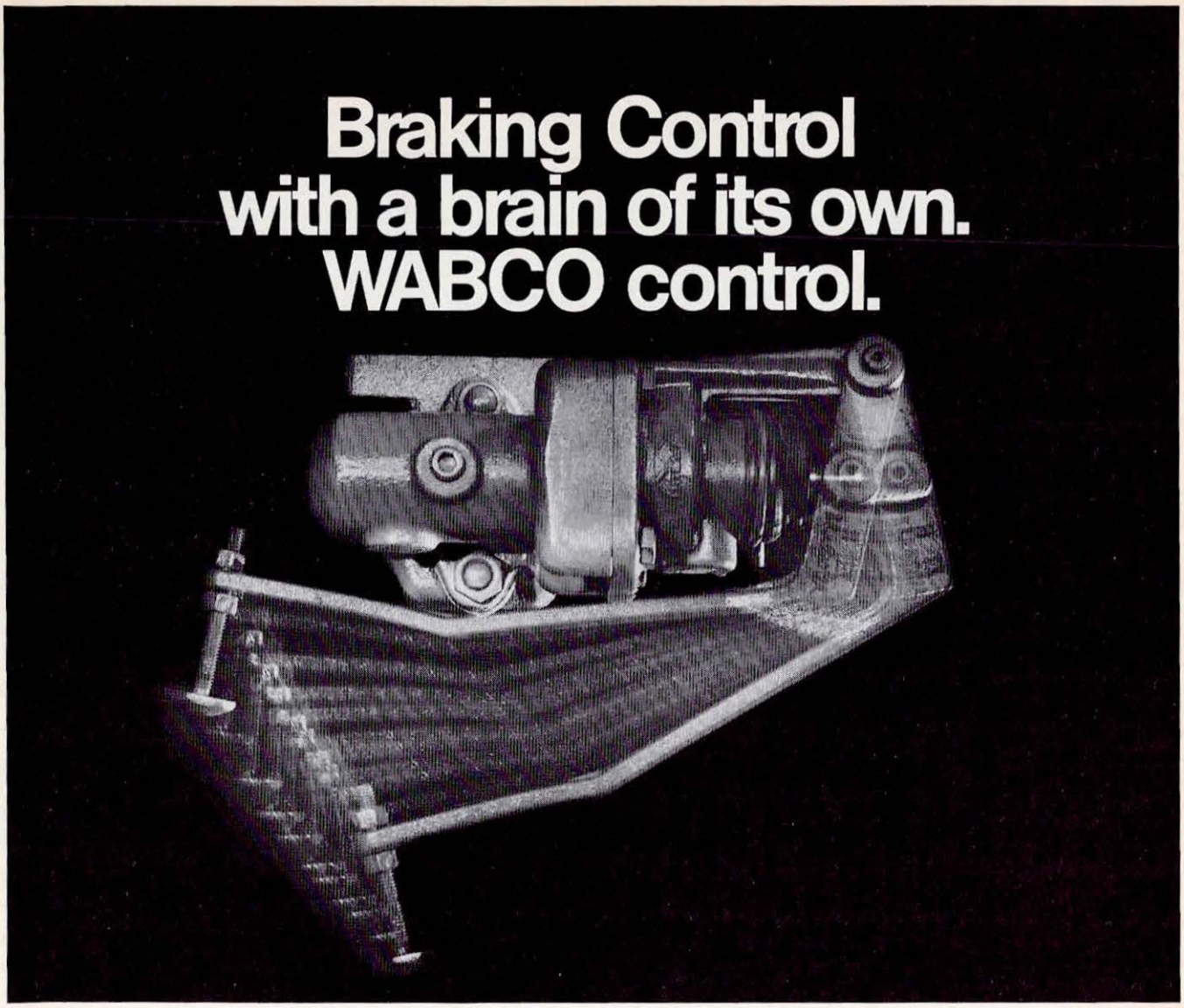

How much brake cylinder pressure does it take to efficiently stop a mixed freight train? It's not the same for every car. With our new SC-1 Empty and Load freight brake equipment, each car in the train determines pressure for itself. That means it is the right amount every time. And that means savings in maintenance and replacement parts.

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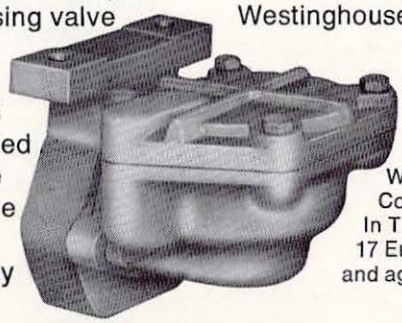
The new system is easy and economical to install and maintain and is compatible with either truck or car mounted brakes. We'd like to tell you more about it. Write Westinghouse Air Brake Division, Transportation Systems Group, Westinghouse Air Brake Company, Wilmerding, Pennsylvania 15148.



The WABCO Transportation Systems Group is: Union Switch & Signal Division, Westinghouse Air Brake Division, WABCO Ltd., Cardwell Westinghouse Company, Freios e Sinais do Brasil S.A. In Transportation, WABCO is also 17 European operations and licensees and agents throughout the world.

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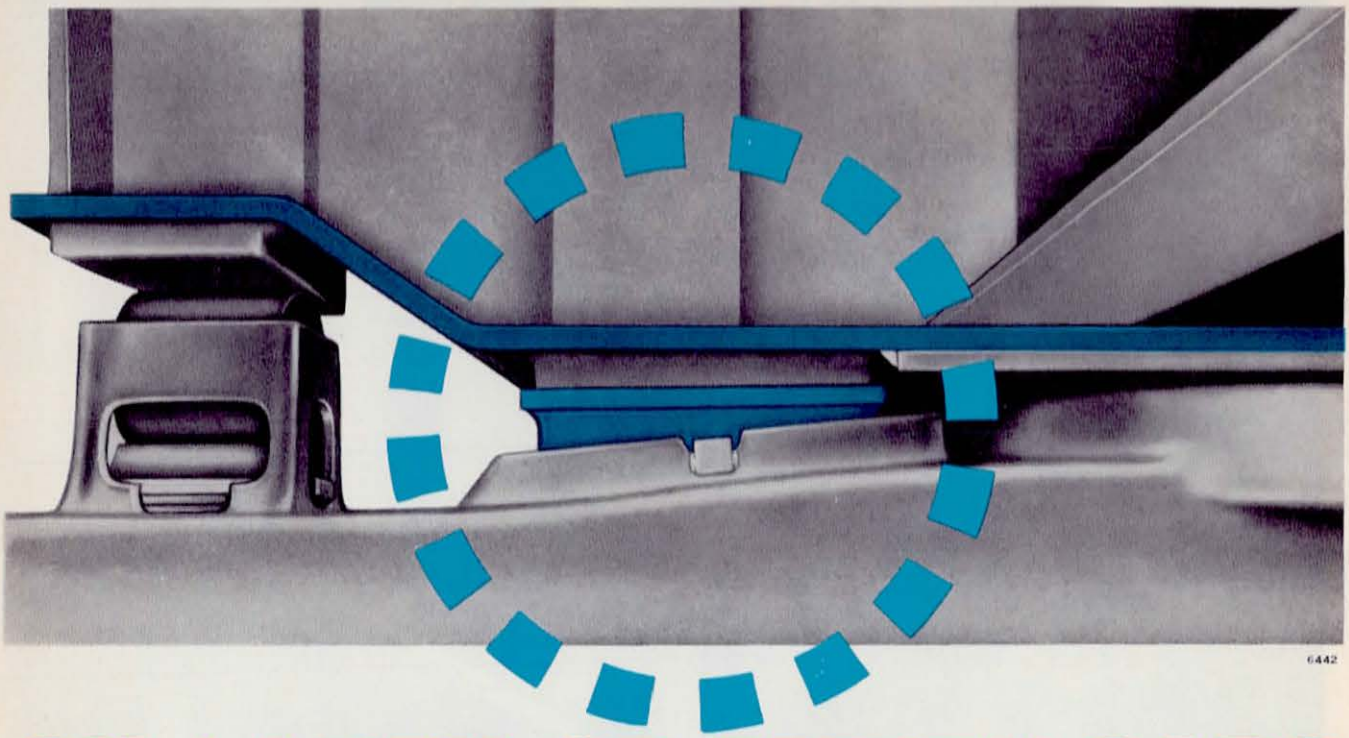

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Inside

LUTHER MILLER

PONDERING THE IMPONDERABLES

Only a few railroads have so far announced capital budgets for 1973; therefore, projecting capital outlays on an industry-wide basis at this point in time is as much an exercise in educated mind-reading as anything else. But Senior Editor Gus Welty's record as an educated mind-reader, as a par excellence ponderer of the imponderables, is just about as good as anybody's in the business, so it is with a fair amount of confidence that we present in this issue his forecast: a 5% spending increase (p. 14).

This may come as a surprise to those familiar with the recently-published annual survey of McGraw-Hill, which anticipates a 1% drop in railroad capital spending in 1973. Let it be remembered, in that connection, that McGraw Hill a year ago was predicting that railroads would cut capital outlays in 1972. At that time, Railway Age was forecasting a 10% increase.

But early in 1972, McGraw-Hill did another survey which showed that railroads, far from cutting spending, would up it by 10%. Both the Department of Commerce and McGraw-Hill are now saying that actual railroad spending in 1972 will end up 8% ahead of the previous year (though we have now changed *our* minds, and are predicting a 5% increase this year as well as a further 5% increase in 1973).

Actually, all current estimates are too close together for any serious quibbling among the forecasters.

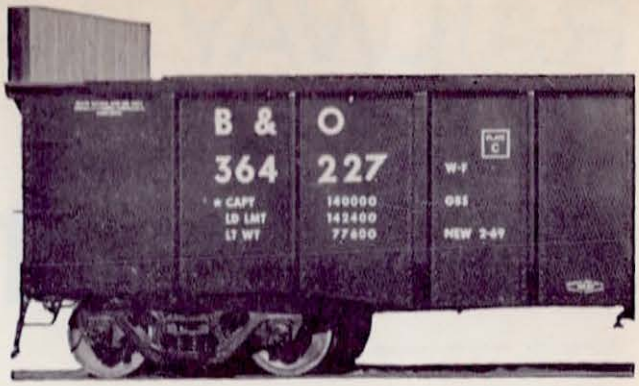
The important thing is that nobody right now is forecasting any major decline—and whether McGraw-Hill is right, or we are right, spending for railroad equipment and roadway next year will again be in the respectable, if not deluxe, neighborhood of $1.8 billion.

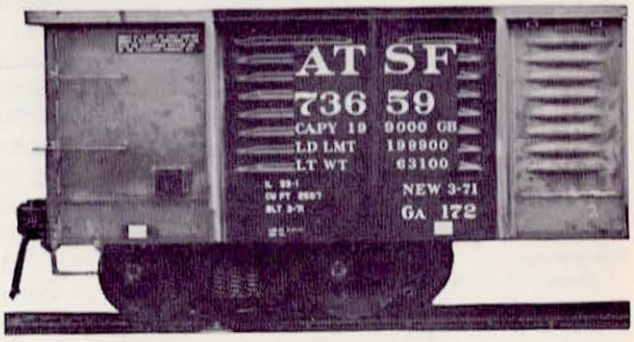
MARKETING THE MARKETING CONCEPT

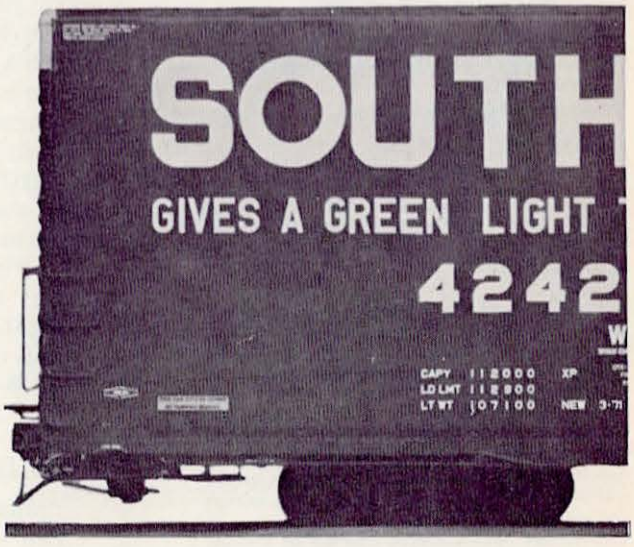
"Marketing managers" as they now exist in the railroad industry run the gamut from old-line salesmen cloaked with new titles to the theoreticians who sometimes seem to talk more to each other, as they agonize over what their profession is really all about, than to their customers. In between, there are some very competent marketing men who are coming up with service-rate-equipment packages that are recapturing old traffic and winning new, as replies to this month's Traffic Poll indicate (p. 31). But as the Poll also shows, the railroad marketing story so far is too often a dismal tale of too-little-too-late. Some of the theoreticians may argue that most shippers don't really know, yet, what marketing is all about. What everybody should remember is that while the customers may not always be right, they *do* always control the traffic, and a careful reading of what they have to say on the subject is prudent, to say the least.

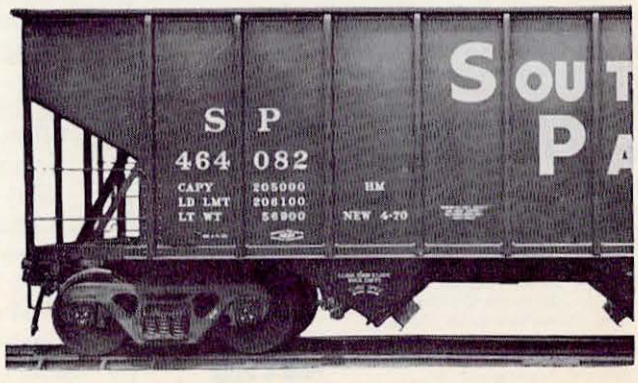
The Poll also suggests that marketing men still have a marketing job to do within their own companies—selling the concept, from top echelons to bottom.

Right now you have half the freight cars you will need in the future









In the next generation we will be faced with doubling every facility in America to make room for a population that will be twice as big as the one we have now.

This means new ways must be found to move high-volume cargo rapidly, safely and economically within our cities and from one city to another. Solutions to these problems can come only from experienced freight car builders who have the knowledge, capabilities and advanced ideas to produce shipper-tailored freight cars.

All of these factors are at work today at Greenville as we work with you to increase traffic by replacing, updating and modifying your existing fleet of cars.

Greenville sees our country's freight transportation problems as a major challenge — and as an opportunity to utilize the company's unique capabilities to become a major part of a new high-growth industry. Call us; you'll see.

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NOVEMBER 27, 1972

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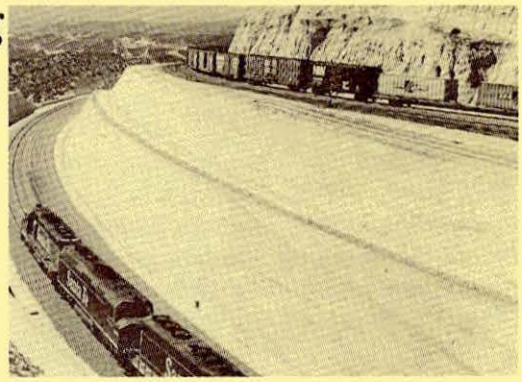

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The picture of Santa Fe's recently-completed Cajon Pass line change project was taken by Santa Fe System photographer R. Collins Bradley, who is based in Los Angeles.

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NEWS

New couplers recommended for many tank cars

All new tank cars would have to be equipped with special Type E couplers with interlocking features to prevent the puncture of tank heads in derailments. That is the initial tentative decision of a tank-car safety project which is being conducted by the AAR and Railway Progress Institute. The industry would also have to schedule a retrofit program that would install these special E couplers on all its existing non-insulated pressure cars and on certain non-insulated, non-pressure cars.

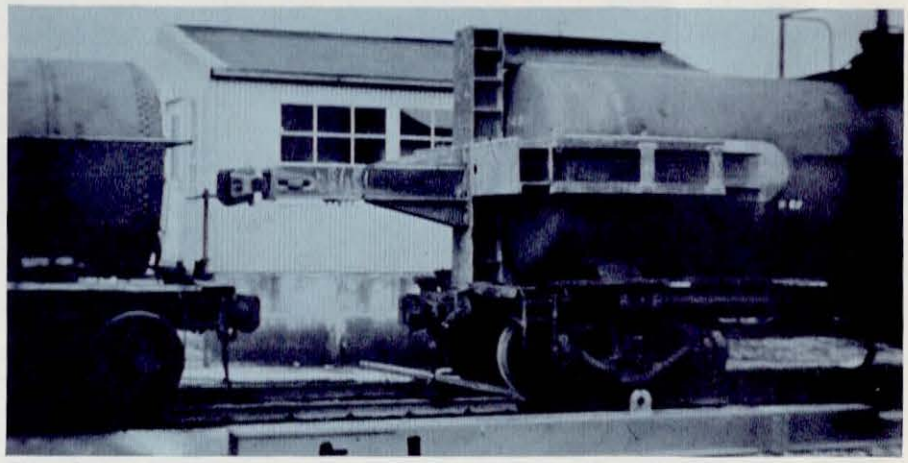
The E coupler is of a new design with top and bottom "shelves" to prevent over-riding, an arrangement that "will significantly reduce the probability of vertical separation and consequent impact or puncture of adjacent cars," according to Earl A. Phillips, project director. Phillips is on leave from Union Tank Car Co. to head up the RPI/AAR investigation.

Further tests are to be conducted with 200 cars equipped with the recommended couplers to be sure that research results are verified by actual performance under normal operating conditions.

In the next phase of the project, a search will continue for a thermal shield material that will reduce the danger of damage by fire following accidents. Phillips reports that numerous coatings supplied by over 15 companies and government agencies have been tested, although none has yet proved to meet all the requirements. Further tests will be conducted to expedite the development of a practical and effective coating. Also expected to be completed during 1973 is additional research on pressure relief valves.

The project represents the largest privately financed safety undertaking in the history of freight transportation, according to John S. Carlson, chairman of the Project Review Committee. Carlson is vice president of ACF Industries and general manager of its Shippers Car Line Division. Other private car lines participating through RPI are General American Transportation, North American Car, Pullman Transport Leasing and Union Tank Car. The project is budgeted for $1.25 million.

Begun in April 1970, the project has had as its objective the improvement of the safety of tank cars when they are involved in accidents by making them more resistant to punctures, ruptures and fires. In addition to expenditures by the AAR and tank car builders, the Federal Railroad Administration allocated funds for tank car research, much of which was conducted in conjunction with the RPI/AAR project.



FULL-SCALE TESTS involved impacting of standing car with coupler mounted on a moving car; another test exposed a filled LPG tanker to fire at missile proving ground.

"Completion of Phase I of this project should go far toward reducing the number and severity of tank car accidents in the future," comments Dr. William J. Harris, Jr., vice president of the AAR Research Test Department. He notes that about half of all tank car shipments involve the transportation of hazardous commodities, some of which can move by no other mode. "Without these vital products and materials," notes Harris, "there would be no chlorine for water purification, no explosives for mining and building; and no liquids and gasses for making rubber, processing leather and preparing food."

The tank car fleet already enjoys a high safety record, according to Dr. Harris. From 1958 to 1970, 113 tank cars ruptured violently; 41 of these accidents occurred during the single year of 1969. The RPI/AAR study resulted from that accident peak.

Data on all accidents involving tank cars were collected for the period from 1965 to 1970 and for all major accidents back through 1958. Since the project began, there have been 26 on-site investigations of tank car accidents by project team members.

In addition to ACF's Carlson and Dr. Harris, the Project Review Committee, which has overseen the project through its planning and implementation, consists of Robert S. Oppenheimer, executive vice president—operations, North American Car; A.L. Berry, president, Pullman Transport Leasing; C.E. Coyl, vice president, General American Transportation; C.A. Love, chief mechanical officer—equipment, Louisville & Nashville; R.D. McEvers, president, Union Tank Car; and Robert E. Taylor, assistant vice president—mechanical, Burlington Northern.

While it was established from the outset that all types of tank cars and ladings would be studied, there was an understanding that special emphasis would be given to those involved in the more severe accidents of the past. Pressure cars that carry such commodities as liquefied petroleum gas, ammonia and vinyl chloride were singled out for special attention. "It should be understood," says Director Phillips, "that we did not set up the project to study the cause of the derailments or other accidents unless they involved something peculiar to the tank car. Our objectives have been to improve our knowledge of what causes punctures and ruptures in tank cars that are in these accidents and then, hopefully, find ways to improve tank cars' ability to resist such damage."

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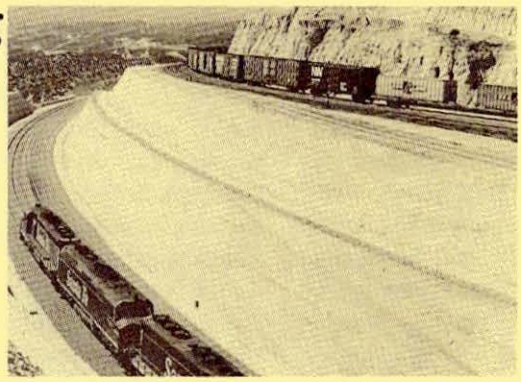

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Short and Significant

CNJ: COUNTDOWN TO SHUTDOWN?

The Jersey Central has furloughed over 450 employees in an effort of conserve its cash and in view of its "inability to secure any funds from outside sources," according to General Manager Charles H. Allen. CNJ's request to the U.S. Department of Transportation for release of a portion of a previously approved $6 million Federal loan has been turned down. In early December the road's creditors will be granted a hearing by Federal Judge Anthony Augelli on their petition for a complete suspension of the bankrupt road's service.

ERIE'S EIGHT-MONTHS LOSS SOARS

In this year's first eight months, Erie Lackawanna had a net loss of $18 million on a fully-accrued basis, including an extraordinary charge of $6 million resulting from the effects of Hurricane Agnes. The loss in the corresponding 1971 period was $1.8 million. Operating revenues dropped from $180.5 million in 1971 to $173.3 million this year; expenses rose from $142.5 million a year ago to $146.2 million in 1972.

HIGH-SPEED TRAIN BILL DUE IN JANUARY

Senators Vance Hartke (D.-Ind.) and Lowell P. Weicker Jr. (R.-Conn.) are reported ready to introduce in the 93rd Congress in January a bill providing for a multi-billion-dollar, two-phase high-speed passenger program in the Northeast Corridor. The bill will call for (1) $625 million for improvements to existing railroad trackage connecting Washington, New York and Boston, including new rail, curve elimination and electrification of the New Haven Line to Boston; and (2) eventual construction, at a cost of $4.5 billion, of a 400-mph tracked air-cushion vehicle (TACV) line. Senator Hartke is chairman of the Surface Transportation Subcommittee, of which Senator Weicker is a member.

RULING SOON ON KATY BARGE ACQUISITION

ICC—probably next year—will rule on yet another acquisition of a barge line by a railroad. This case involves control by Katy Industries Inc. of three water carriers. Coming on the heels of the Oct. 20 decision permitting Southern to acquire an Ohio River barge company, a favorable Katy ruling is sure to stimulate intense water carrier opposition. American Waterways Operators, Inc., has already said in Washington it may seek to fight the Southern approval in the Federal courts. Ironically, Southern officers said their plan approved by ICC to haul coal by water is no longer feasible.

NW EXPANDS COMPUTER SERVICES

Norfolk & Western, which earlier this year purchased two IBM 370/165 central processing units at a cost of $7.8 million, is now carrying out "a major reorganization and expansion of computer services to meet anticipated needs for the remainder of the decade." John R. Turbyfill, NW vice president-administration, said the enlarged program will be aimed at improving efficiency in five major areas: freight-car distribution and utilization, material management, maintenance of cars and locomotives, maintenance of way, and transportation personnel. Luther A. Twist, the present director, will be in charge of the reorganized department. Eight other staff members have been assigned additional responsibilities—and NW will add 31 persons to its computer staff within the next few months.

AMTRAK THIRD-QUARTER REVENUES UP 13.2%

Amtrak reported Nov. 15 third-quarter revenues of $46.9 million, a gain of 13.2% over the previous quarter. The intercity passenger carrier said all but three of Amtrak's participating railroads showed passenger revenue increases for the period, with Penn Central alone recording a 17.6% gain.

ALASKA RR TO ASK FOR 10% RATE INCREASE

When the Nixon Administration took office in 1969, it placed the Alaska Railroad up for sale. There were no buyers, and DOT sources now say no one there has any expectation it will be sold. Alaska Railroad itself will ask ICC soon for a 10% general freight rate increase. The last Alaska rate increase was in April, when the road received a 2% increase. Prior to that, Alaska got a 9% hike in 1964. FRA officials say the road needs an increase to boost operating revenues which now total $21 million annually. Last fiscal year, the road had a $284,547 loss compared with a $3-million net loss in 1971.

PC TO OPPOSE SOUTHERN ACQUISITION OF NS

Penn Central served notice Nov. 14 it would oppose Southern's acquisition of the Norfolk Southern. In a petition filed with ICC, the bankrupt PC said the proposed merger would close an important interchange for freight cars between PC and NS at Norfolk, Va. PC said last year 9,262 freight cars were interchanged at Norfolk, with more than 6,000 northbound. A shutdown would move the interchange point to Alexandria, Va., with a resultant decline in revenues to PC. Seaboard Coast Line made a similar complaint about the proposed merger last summer but since has withdrawn its objections.

fact

Records for over 45,200 Hydra-Cushion-equipped cars all having at least 1 year in service show an outstandingly low maintenance cost on the underframe itself — averaging as low as $1.80 per car, per year for replacement parts (and that not only takes into account all required parts because of normal wear, but because of *all* external causes as well)!

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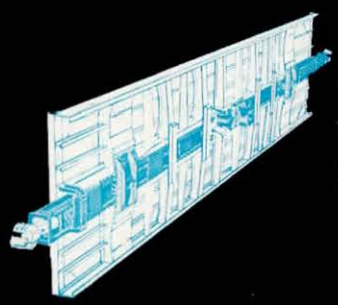
Hydra-Cushion Underframes have been proven in service over a longer period of time (17 years now) than any other modern cushioning device — and the list of carriers using them continues to grow because H-C Underframes do what they do, better!

fact

The unique H-C design gives freight cars an extra cushion of protection to better absorb shock forces — and this can mean significant savings to you in reduced lading damage claims and in reduced maintenance costs on cars themselves!



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New couplers recommended for many tank cars

All new tank cars would have to be equipped with special Type E couplers with interlocking features to prevent the puncture of tank heads in derailments. That is the initial tentative decision of a tank-car safety project which is being conducted by the AAR and Railway Progress Institute. The industry would also have to schedule a retrofit program that would install these special E couplers on all its existing non-insulated pressure cars and on certain non-insulated, non-pressure cars.

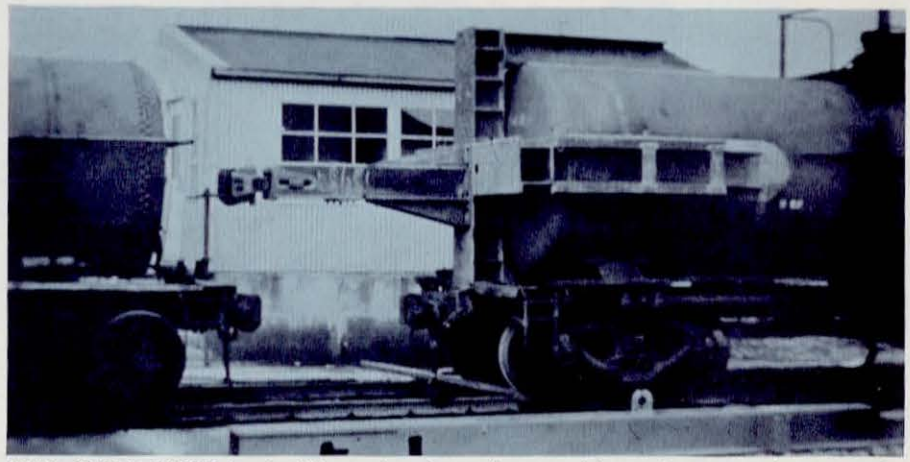
The E coupler is of a new design with top and bottom "shelves" to prevent over-riding, an arrangement that "will significantly reduce the probability of vertical separation and consequent impact or puncture of adjacent cars," according to Earl A. Phillips, project director. Phillips is on leave from Union Tank Car Co. to head up the RPI/AAR investigation.

Further tests are to be conducted with 200 cars equipped with the recommended couplers to be sure that research results are verified by actual performance under normal operating conditions.

In the next phase of the project, a search will continue for a thermal shield material that will reduce the danger of damage by fire following accidents. Phillips reports that numerous coatings supplied by over 15 companies and government agencies have been tested, although none has yet proved to meet all the requirements. Further tests will be conducted to expedite the development of a practical and effective coating. Also expected to be completed during 1973 is additional research on pressure relief valves.

The project represents the largest privately financed safety undertaking in the history of freight transportation, according to John S. Carlson, chairman of the Project Review Committee. Carlson is vice president of ACF Industries and general manager of its Shippers Car Line Division. Other private car lines participating through RPI are General American Transportation, North American Car, Pullman Transport Leasing and Union Tank Car. The project is budgeted for $1.25 million.

Begun in April 1970, the project has had as its objective the improvement of the safety of tank cars when they are involved in accidents by making them more resistant to punctures, ruptures and fires. In addition to expenditures by the AAR and tank car builders, the Federal Railroad Administration allocated funds for tank car research, much of which was conducted in conjunction with the RPI/AAR project.



FULL-SCALE TESTS involved impacting of standing car with coupler mounted on a moving car; another test exposed a filled LPG tanker to fire at missile proving ground.

"Completion of Phase I of this project should go far toward reducing the number and severity of tank car accidents in the future," comments Dr. William J. Harris, Jr., vice president of the AAR Research Test Department. He notes that about half of all tank car shipments involve the transportation of hazardous commodities, some of which can move by no other mode. "Without these vital products and materials," notes Harris, "there would be no chlorine for water purification, no explosives for mining and building; and no liquids and gasses for making rubber, processing leather and preparing food."

The tank car fleet already enjoys a high safety record, according to Dr. Harris. From 1958 to 1970, 113 tank cars ruptured violently; 41 of these accidents occurred during the single year of 1969. The RPI/AAR study resulted from that accident peak.

Data on all accidents involving tank cars were collected for the period from 1965 to 1970 and for all major accidents back through 1958. Since the project began, there have been 26 on-site investigations of tank car accidents by project team members.

In addition to ACF's Carlson and Dr. Harris, the Project Review Committee, which has overseen the project through its planning and implementation, consists of Robert S. Oppenheimer, executive vice president—operations, North American Car; A.L. Berry, president, Pullman Transport Leasing; C.E. Coyl, vice president, General American Transportation; C.A. Love, chief mechanical officer—equipment, Louisville & Nashville; R.D. McEvers, president, Union Tank Car; and Robert E. Taylor, assistant vice president—mechanical, Burlington Northern.

While it was established from the outset that all types of tank cars and ladings would be studied, there was an understanding that special emphasis would be given to those involved in the more severe accidents of the past. Pressure cars that carry such commodities as liquefied petroleum gas, ammonia and vinyl chloride were singled out for special attention. "It should be understood," says Director Phillips, "that we did not set up the project to study the cause of the derailments or other accidents unless they involved something peculiar to the tank car. Our objectives have been to improve our knowledge of what causes punctures and ruptures in tank cars that are in these accidents and then, hopefully, find ways to improve tank cars' ability to resist such damage."

PC: New attack on losing branches

Frustrated by the ICC in its efforts to abandon large segments of unprofitable branch lines, the Penn Central is now considering "other avenues for attacking this serious problem," says PC President William H. Moore.

Moore did not specify what these new avenues might be—but he had commented earlier that, while elimination of branch-line losses has traditionally been accomplished by abandonment "we are willing to contract with public bodies or shipper groups for an underwriting of the service."

Addressing the President's Council Dinner at Transylvania University in Lexington, Ky., on Nov. 17, Moore said that in working toward a reorganization plan "our most unsatisfactory progress is in the elimination of unprofitable branch lines." Noting that PC has "at least 5,000 miles in this category," Moore added:

"To date, Interstate Commerce Commission procedures are proving totally inadequate. Our latest figures show that out of 2,780 miles of line applied for, the ICC has thus far approved only 732 miles."

Moore emphasized that the trustees feel that "the railroad, or at least its essential components—the 'core'—will be continued as a going concern."

He said the trustees' decision on the form of reorganization will be made by mid-February 1973 and "it will take some six weeks thereafter to incorporate the conclusions into a plan."

Moore also said: "There are forces at work in our country that would have you believe nationalization is the answer for Penn Central and perhaps the entire railroad industry. Nationalization of the Penn Central or other railroads is not the answer. It would be a fool's paradise. It would solve nothing, and probably delay for decades implementation of reasonable solutions to the industry's problems, while the country suffered with a below-par, under productive, overly-costly railroad system."

On the question of freight service, Moore said complaints from shippers are now averaging five a week, compared to a high of 70 a week early in 1971. He said PC's share of Eastern District railroad traffic now stands at more than 36% vs 33.7% in 1970.

As for passenger service, Moore said that Amtrak in 1972 will pay PC approximately $24 million, "which is $55 million short of total reimbursement." He said negotiations with Amtrak are continuing. The present basis of compensation is on a solely related cost basis, plus some percentage overrides.

Lines on Labor

GUS WELTY

JUST THE FACTS, MA'AM. . .

There are certain facts that are real, actual, accurate, true facts. For instance: (1) The Pope is a Catholic, (2) Brigitte Bardot is still a doll, and (3) management/labor negotiations can't be conducted in a fishbowl. Well, the Pope and Brigitte are still safe. But some doubt may be cast on (3), if the Chicago Board of Education and the Chicago Teachers Union follow through on what they've been talking about—which is, most simply put, a plan to hold their upcoming contract negotiations in public.

OPEN NEGOTIATIONS: A PLUS HERE, A MINUS THERE

To be sure, the Chicago plan could be ripped apart. There are ground rules to be agreed upon, and even if everything starts out in public there is always the chance that events will make it advisable that some kind of curtain later be dropped. And, of course, there may be more valid reasons why negotiations with a teachers' union—as opposed to negotiations in an ordinary management/labor situation—should be conducted openly. After all, the general tax-paying public—as opposed to a corporation's customers and stockholders—pays the bill for whatever agreement is eventually reached. Still, there is something about the idea of open, full-disclosure, fishbowl contract talks that catches the imagination.

History seems to indicate that in most "traditional" bargaining, there are few joint statements issued by the parties—and that most of these either report "no progress" or "cautious optimism." What the parties put out individually is hardly more helpful, since it is almost always self-serving and almost never very informative. In the case of railroad-industry bargaining, as one example, the "public" stage is reached only if and when an arbitration board or an emergency board comes into being. The former is a seldom thing. And, while the emergency-board procedure, with its hearings and recommendations, is supposed to have a mobilization-effect on public opinion, it really doesn't.

But open negotiations from the very beginning? There could be advantages, in terms of toning down outrageous demands. There could also be disadvantages, in terms of putting a damper on give-and-take.

OPEN OR CLOSED, WHAT'S AHEAD FOR RAILROADS?

Under present circumstances—mostly because of the existence of the Pay Board—there is, in fact, a certain greater openness to bargaining. But, there are questions as to what happens to economic controls after next spring. There are questions as to how and when rail labor organizations will make their new demands. There are questions as to how ethereal those demands will be. Talk coming from a few unions—talk of 30% pay increases and a four-day work week, for instance—would seem to point to rather dreamy demands coming up.

And this kind of talk—to an onlooker and onlistener, at least—always raises another question: Does it really—*really*—serve union leadership to ask for the moon and settle for the inevitable moon rock? Or would union leadership actually be farther ahead—assuming, and it can be, that the rank-and-file can add two and two—to put its goals in attainable terms? Railroads and rail unions probably don't need *public* bargaining. But they surely do need *practical* bargaining.

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Southern in Amtrak? No, says Claytor

When the National Railroad Passenger Corp. (Amtrak) came into being on May 1, 1971, the passenger-carrying railroads had a choice: either buy into Amtrak, and get rid of intercity passenger-service deficits forevermore; or go it alone—the price of the latter being a requirement to continue existing service until Jan. 1, 1975.

Most railroads bought in. Three decided to go it alone, and the biggest of these, in passenger-train terms, was the Southern. Recently the National Association of Railroad Passengers has been publicly prodding the Southern to change its mind and join Amtrak next March 1, when it will be eligible to do so under the 1970 law which created the corporation. Conceding that Southern's decision not to join Amtrak had had no immediate adverse effect on service in the South, NARP nonetheless suggested that by joining Amtrak Southern would give its passengers access to new, experimental equipment (e.g., Turbotrains) and to such additional amenities as automated reservation and information systems.

Last week, NARP had its answer. It was a polite but firm "No" from Southern President W. Graham Claytor, Jr., who asserted: "We are operating our own first-class passenger service and will continue to do so, working closely with Amtrak on both connecting service and reservations."

And Claytor added: "We hope very much that no legislative or regulatory action is taken that would force any other decision, and we anticipate no action."

Claytor then went on to describe his railroad's post-Amtrak passenger operation. Said Southern's president, who was well known for taking pride in maintaining good passenger service at a time when other chief executives were ready to throw in the towel:

"In the past 12 months we have not only refurbished (new painting, upholstery and carpeting), but have given heavy general repairs including truck overhaul to 45 passenger cars, including three baggage, five combined coach or dormitory and baggage cars, 27 coaches, two diners and eight sleeping cars. Our on-going program calls for a similar general overhaul once each three years for all of our passenger carrying equipment and once each four years for our baggage cars. This overhaul and refurbishing program is currently on schedule.

"As Southern has reduced its passenger services over recent years, it has retired or disposed of its older equipment, and the passenger equipment currently assigned and on the maintenance schedule described above is both modern and in good condition. We have no present need to purchase new equipment and no plans to do so at this time. What our plans will be several years in the future we are not currently in position to say with respect to the purchase of either passenger or freight equipment."

"We will continue to operate our own first-class service"
Southern President W. Graham Claytor, Jr.

Claytor emphasized the Southern's willingness to participate with Amtrak in a nationwide computerized reservation service, to coordinate its fare structure with that of Amtrak, and to permit its dining cars and trains to operate over Amtrak north of Washington if reimbursed for costs incurred and use of its equipment.

"When Amtrak revised its fare structure last June Southern joined it in experimenting with the family fare plan and adjusted its fares so as to be comparable to those charged by Amtrak in our territory. We have worked closely to coordinate our fare structure with that of Amtrak. . .

"As to dining-car service north of Washington, it was made clear to Amtrak over a year ago that Southern was willing to permit its dining cars and crews to operate in Amtrak trains north of Washington if reimbursed. . . However, experience prior to Amtrak had shown that the costs of this service are high, and Amtrak (not Southern) elected instead to use its own dining car service north of Washington. Even though our dining cars are turned at Washington, Amtrak provides full dining car service on its connecting trains through to New York and Boston."

And what do passengers think of Southern service compared with that of Amtrak? Claytor did not—could not—address himself to this question. But he did say that Southern's traffic volume increased during May and June by 13.2%, or almost at precisely the same rate as Amtrak's volume, which increased by 13.6% nationwide.

AAR optimistic on car supply

The power to impose monetary penalties for violation of car service orders and car movement directives has been of great benefit to the AAR Car Service Division in its control of car supply for handling the Russian grain movement. Despite dire predictions, the shipment of grain to the Soviet Union has not resulted in massive car shortages, reports H.P. Kappel, director of closed car utilization for AAR's Car Service Division.

However, Kappel has cautioned that he cannot "indulge in sweeping promises" about the months ahead. "There are a lot of variables," he explained. "The pipeline from the U.S. to the Soviet Union is a long one. Any foulup, anywhere along that long journey, can make itself felt all the way back to the starting line."

Kappel told a food transportation group that railroads are optimistic about their ability to meet this year's demand for freight cars without shortchanging their year-around customers. He added that the industry has been receiving excellent cooperation from grain shippers and elevator operators.

Railroads have expanded the capacity of the car fleet and improved its utilization and distribution. Kappel credited such individual railroad efforts as run-through trains, unit trains, and incentive rates for improving utilization. Another factor is the railroads' own information systems coupled with the AAR's TeleRail Automated Information Network (TRAIN) which reports car interchanges in the central computer at AAR headquarters. Kappel also credited the close cooperation of the Interstate Commerce Commission with railroads and shippers as aiding the situation.

"I'm not trying to give you a false sense of security," warned Kappel. "Events could yet conspire to cause us problems. But we have reason to be optimistic."

Meanwhile, the Canadian Government's sale of wheat to China is not expected to strain Canada's transport system unduly. This contract for $150 million, the third such deal with China, will not call for deliveries to start until April 1973 when the previous two run out. The Canadian Wheat Board expects to put the first of its 2,000 new covered hoppers in grain service early in December, aiding in current grain shipments to Vancouver, B.C., through which the Chinese grain moves. While Canada's car supply had been adequate through early November, it was reported to be tightening as there was a net outflow of box cars from Canada to the U.S.

Watching Washington

REID BEDDOW

THE PASS IMPASSE

Rails and Amtrak are very much at odds these days over how much, if anything, rails should reimburse Amtrak for free and reduced fares for rail employees, retirees, and dependents. The dispute, now before ICC, has all the earmarks of a good family fight with passions running high and logic gone astray. It is not unlikely the dispute will drag on for some time with either party seeking redress in the Federal courts or asking Congress for new and clarifying legislation.

It was Congress who started the fight in June 1972, when it passed an amendment to the National Railroad Passenger Corporation Act of 1970 requiring Amtrak to provide eligible rail employees with free or reduced rate transportation "provided space is available." The amendment further provided that rails reimburse Amtrak for "such costs as may be incurred" in administering the service.

Rails and Amtrak soon found they were unable to agree on a joint policy to implement the new law. Tempers frayed. Amtrak officers had some pretty harsh things to say about rail pass policies, which undeniably have grown up over the years in an uncoordinated, local fashion. Amtrak rejected rails' offer to administer any program themselves.

Unspoken but very relevant to the dispute is Amtrak's desire to present the public with a fresh face, untainted by too close association with rails. Reportedly, Amtrak was not too happy contemplating crowds of rail retirees reminiscing about the old days when transcontinental passenger trains were lined up like race horses in major city terminals. This is not the new Amtrak image.

Doubtless calmer men could have reached agreement. After all, even lawyers should see that custom and tradition have a force independent of cost accounting and Madison Avenue, and the custom and tradition of railroading is for leniency in the matter of passes. They are perks that go with the job.

The fat hit the fire when Amtrak on Oct. 19 asked ICC to determine its cost in providing the service at 10 cents per passenger mile.

In its reply, filed Nov. 3, AAR declared such a rate would cost rails $67.2 million a year. AAR instead found the rate to be 0.867 mills per passenger mile "or zero" after being offset by reduced rate revenues, food purchases, and the like. AAR further asserted Amtrak's proposed 10 cents a mile rate was more than the 4.6 cents per mile Amtrak charges the public to ride its trains.

Between such opposite poles, there does not seem to be much leeway for ICC to come up with a Solomon-like decision. With one eye on Congress, ICC wishes the whole matter would just go away, letting the family fight it out in private.

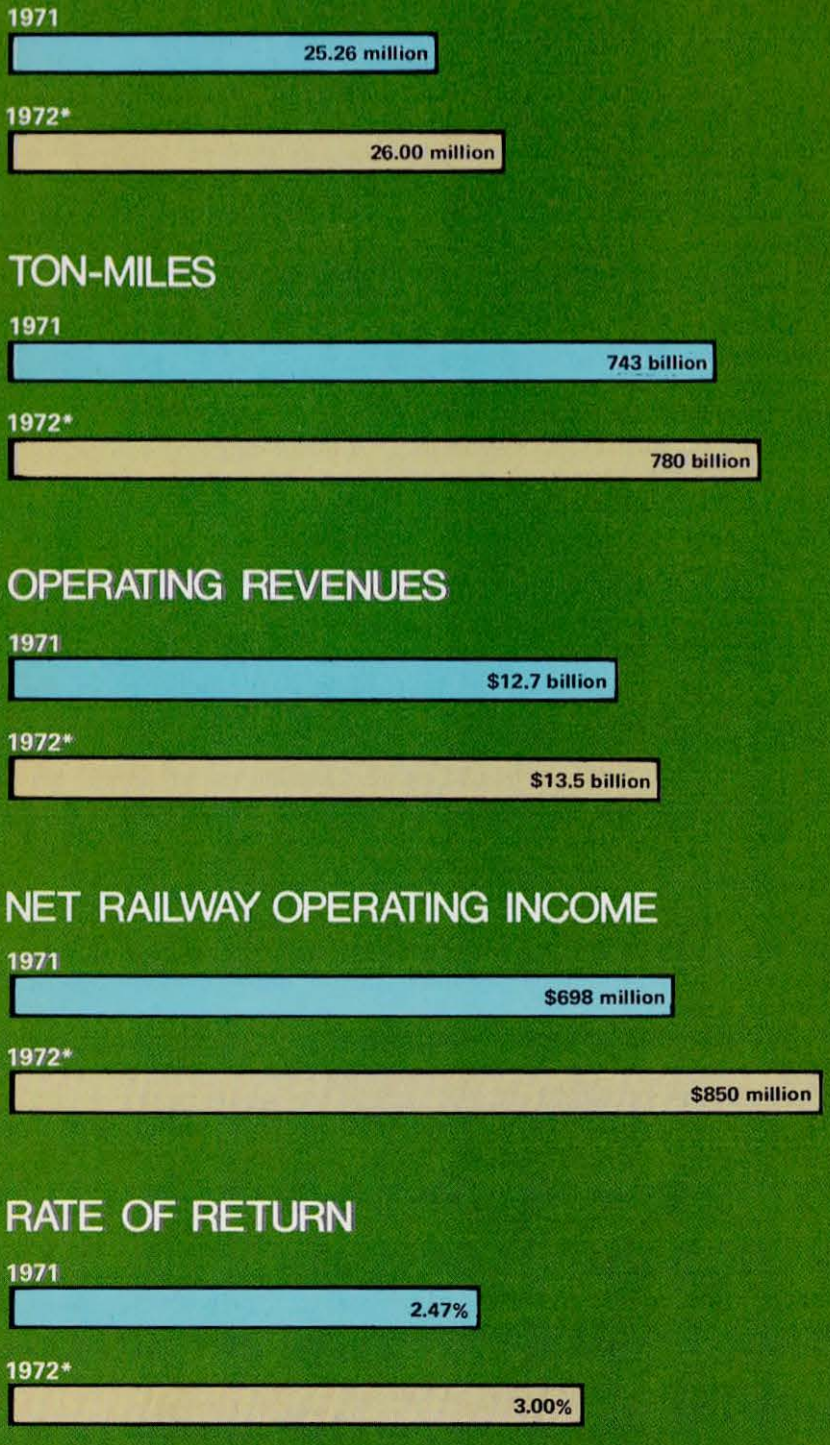
AT DOT, THE GUESSING GAME GOES ON

President Nixon's announced program to reshuffle Cabinet and other officeholders has set new rumors flying. DOT Secretary Volpe has long been regarded as earmarked for departure; many now say he will be replaced by defeated Sen. Gorden Allott (D.-Colo.), former Kentucky Gov. Louis Nunn, or Cost of Living Council Director Donald Rumsfeld.

Budget-planning

Capital spending: The squeeze

With '72 operations ending on a moderate upswing...



*Projected for 12 months 1972.

By GUS WELTY Senior Editor

Three years probably do not make a trend, at least not in the fast-moving '70s. But, for anybody interested in improvement of the railroad system, there's some encouragement to be drawn from today's best available information on capital spending for rail equipment and plant: There's an upturn under way.

The gains are not huge, especially when inflation is taken into account. But the increases may still be significant, for several reasons: (1) The period 1971-73 will be the first stretch of years since the early and mid-'60s in which increase has followed increase; (2) a supply industry which yearns for stability almost as much as it yearns for prosperity may now be better able to plan operations; and (3) railroad managers are demonstrating, in the face of far-less-than adequate earnings, a continuing willingness to invest in the industry they believe in.

At this point, final figures are not in on 1972, and many roads are still putting the final touches on 1973 capital budgets. But, the combination of fact, estimate and projection now looks like this: For 1971, capital expenditures totaling $1.67 billion; for 1972, $1.75 billion; and for 1973, $1.84 billion. The figures cover both railroads and the private companies which furnish equipment for rail service.

● **Not a boom—but.** . .Obviously, these are not boom-year levels for capital budgets—especially if you're comparing with a year such as 1966, the peak year, when railroads alone poured more than $1.95 billion into improvements. Given the problems of the industry over the past half-decade, however, things could be a lot worse.

Current estimates point to total 1972 freight-car orders, for example, in the 50,000-to-52,000 range—with not much shift up or down in orders projected for 1973. The locomotive business has been somewhat more active, in relative terms and in terms of units actually placed in service. Here, the addition shows 1,190 units installed in 1971—but the estimate for 1972 is about 1,300 units and '73 has a good chance of equaling that total.

In 1972 estimates and '73 projections, the breakdown between investment for equipment and for fixed facilities also takes an interesting turn. In relative terms again, expenditures for plant are rising at a better rate than expenditures for rolling stock. Last year, roadway-and-structures capital

goes on, but...

spending was less than $315 million. But the estimate for 1972 is $430 million, and next year's total is projected at about $460 million. In part, this may reflect major construction projects undertaken by several roads, including Southern Pacific with its Colton Yard and Burlington Northern with Northtown Yard, extensive construction in the Spokane area and a second new yard coming up (also near Spokane).

As usual, capital investment plans by individual roads are a mixed bag of uppers, downers and eveners. Taking the last first, it would appear that such roads as Union Pacific, Missouri Pacific, Frisco, Illinois Central, Southern and Penn Central may match '72 spending in '73. SP is one major road that's planning to spend less next year, and BN is another. And on the up-side, at this point, there may be such as Santa Fe, Norfolk & Western and Lehigh Valley.

All figures are subject to change, of course. In some instances, capital-spending plans must still get board approvals. And economic factors—generally and specifically—can have a powerful effect on spending, as they did this year, for example, with Chesapeake & Ohio/Baltimore & Ohio which cut back sharply from original budgeted totals.

● **Taking a look ahead.** How about the economy for '73? Most forecasts tend to be on the optimistic side and, as a matter of fact, railroads may land running—coming off a tolerably good fourth quarter which should be helped by increased grain movements and by the absence of a coal strike.

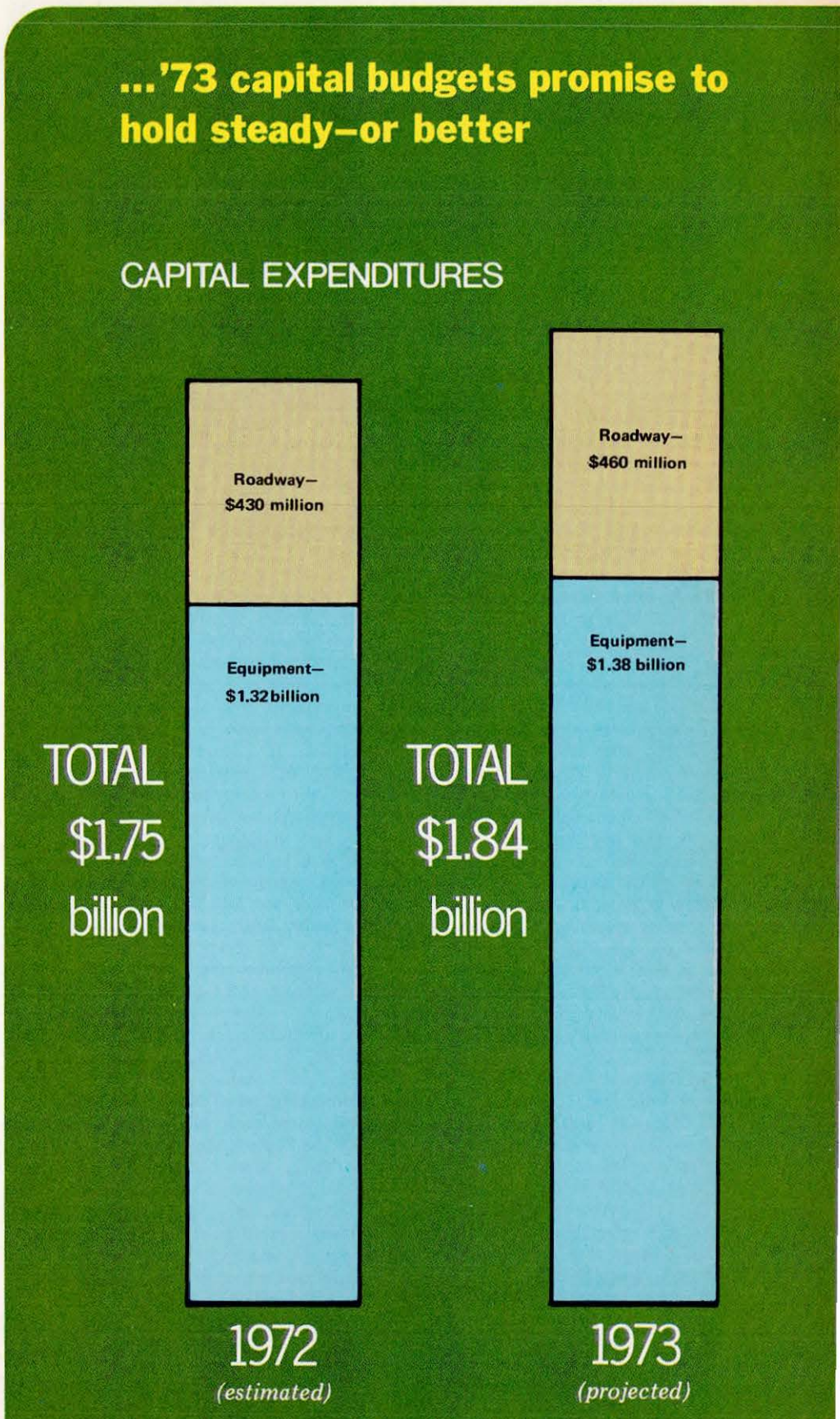
Results for full-year 1972 will probably show something like this:

—A new record high in revenue ton-miles with 1972 checking in at about 780 billion, up from 743 billion last year and from 767 billion in the old record-high year, 1969. With the ton-mile increase may also come an increase in carloadings, now estimated at approximately 26 million for '72, up about 3% from 1971 totals.

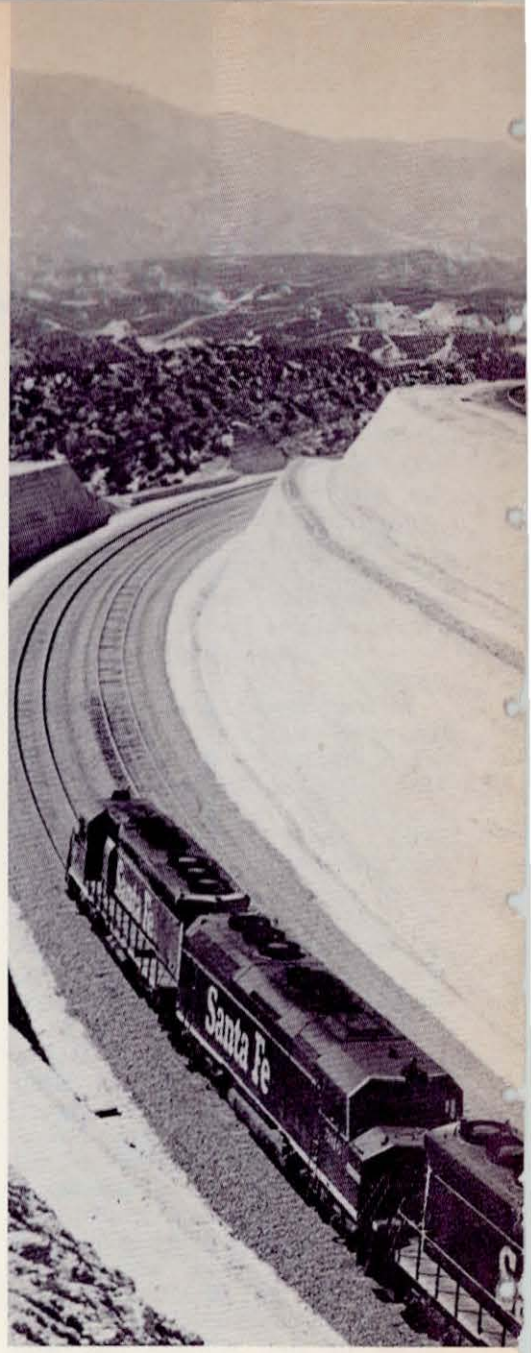
—Total operating revenues of $13.5 billion, another record high. Best-available estimates now are that net railway operating income may reach $850 million for calendar '72, and this would produce a rate-of-return of 3%, up from the 2.48% return of 1971 on net railway operating income of less than $700 million.

● **Questions follow questions.** Then come the imponderables. What kind of cost increases will railroads really be faced with? What sort of demands will

...'73 capital budgets promise to hold steady—or better



A growing unity of purpose among railroads, as they tackle industry-wide problems, is making the available money work harder



rail labor put on the industry after Jan. 1? What kind of settlements—pattern or otherwise—will finally be reached? How about the Administration and the Congress? The Administration, as well as rail labor, came around to a support position on the Surface Transportation Act in '72, but will it happen again? Or will a re-elected Administration revert to the original DOT proposals which railroads, truckers and waterways operators found faulty? And will rail labor, deep in negotiation, use its legislative support as a bargaining weapon? Will railroads be able to make further productivity gains, based on agreements already reached with the operating organizations? Will railroads be able to show new gains in, for instance, equipment utilization? Will the railroads themselves—let alone the industry and its new allies—be able to demonstrate a continuing unity of purpose? What will be the real impact of FRA's track standards, and how about the equipment standards, and what may be expected when operating-practice standards are developed?

If you want to become a rich man, put a right answer to every one of those questions.

And then add a few more queries. What will railroads finally agree on as to the rate-increase proposal which seems inevitable? What attitude will the Interstate Commerce Commission and the other Federal-level economic regulators take? How about the price of borrowed money, and the continued availability of funds? Will the railway supply industry grow, shrink or remain stable? What new demands will be placed on the monies available to railroads, either capital or operating? Will railroads be able to cope with the seemingly insatiable demands of those who gather under the tent-like banner of consumerism?

● **On the positive side. . .** In the context of all these questions, it might be wise to keep several things in mind. One is that a solid base has been built for 93rd-Congress consideration of a new Surface Transportation Act. Another is that rail management and rail labor have also laid a solid base from which they can build together—and hopefully that base won't crumble under the pressure of 1973 bargaining. Still a third is that railroads generally have been able to work more closely together and to direct available resources toward the solving of transportation-service problems—and this has had a couple of positive effects: (1) It has made available money work harder; and (2) it has demonstrated that the railroad is a vital tool in the whole distribution process—a fact that has occasionally been clouded with doubt on the part of customers and others. Finally, there is this to consider: In most capital-investment planning, it's better to build on a conservative foundation than to have to rip away at an over-built structure at the point when planning must be brought into line with a sudden new reality.

The railroad industry *is* conservative. Perhaps by necessity, it will continue to be—by the necessities imposed by economics and by those imposed by politics (since there will always be those who use any sign of industry strength, no matter how small, as a rationale for doing nothing about the problems imposed from the outside and only correctable from the outside).

● **How budgeting shapes up.** What are the patterns, then, for 1973? A fast swing around the West picks up most of them.

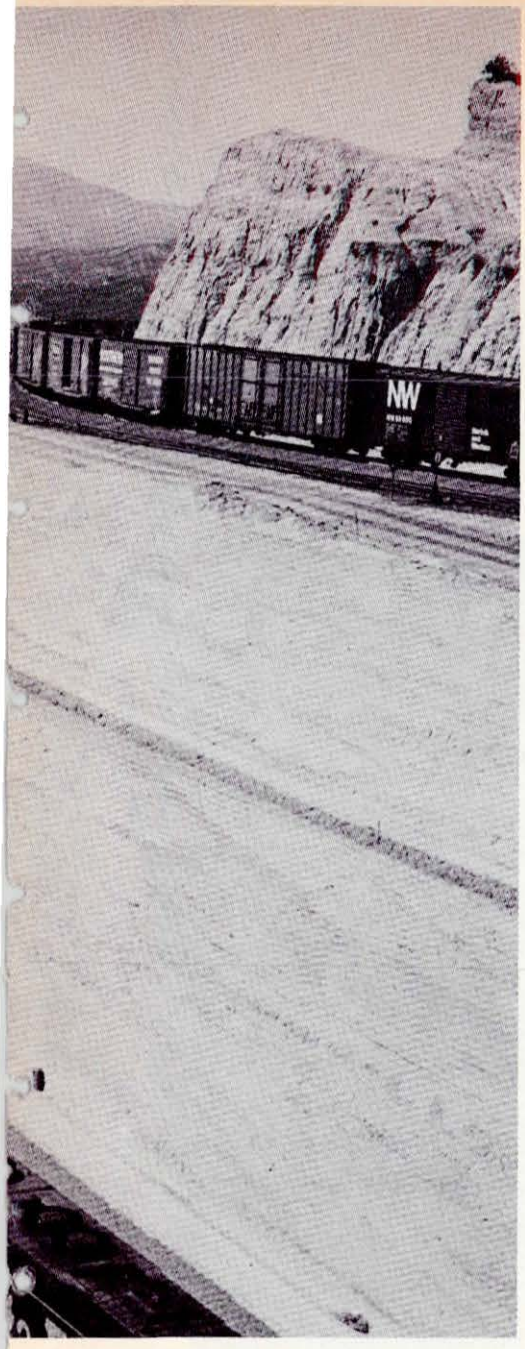
Consider, for example, four major transcontinentals—four roads which, incidentally, will be pumping close to a half-billion dollars into equipment and plant improvements next year. First, take Southern Pacific. SP is coming off the largest capital-spending year in SP corporate history, with more than $273 million of a total $300-million budget going for railroad improvements. To nobody's surprise, SP won't match those figures in '73—but the planned budget, nudging the $200-million mark with better than $152 million for railroad improvements, will still put SP at or near the top in the industry. And spending for fixed-facility improvements will drop only slightly, from $74.7 million this year to $68.5 million next year. Among the major projects planned: Completion of Colton Yard, installation of ctc between Hondo and Sierra Blanca, Tex., a distance of more than 475 miles, and installation of something less than 360 miles of new rail (most of it 136-pound welded rail for the El Paso-San Antonio line).

Then, there's Burlington Northern. Like SP, BN is budgeting a lower total figure for 1973—with capital requirements figured at about $135 million, or approximately $15 million less than estimated expenditures for '72. Fixed-plant spending, however, may actually rise next year, as BN expands its track and bridge programs and moves farther along with Northtown Yard.

No breakdown is yet available for '73 on a third transcontinental, Union Pacific. For '72, UP initially budgeted $106.3 million and may exceed that figure by year-end. And, while 1973 budgeting hasn't yet been completed, it's expected that total UP spending will be in the same range as in '72.

Finally, there's Santa Fe—and Santa Fe is one road that apparently will be going more heavily into equipment investment for '73. At this time last year, the road was talking in terms of $63 million for equipment, out of a total $100-million budget. Santa Fe's complete capital-spending program for 1973 hasn't yet been announced—but the equipment part of it has, and the figure is $72 million.

● **Long range planning.** Several factors seem obvious. One is that while most roads have gone to long-range planning for equipment acquisition, that doesn't mean that spending priorities will remain the same year after year, especially



SANTA FE's $4.3 million line-change project through Cajon Pass was one of the major railroad engineering projects completed in 1972. Reduction of 3% gradient and 10-degree curvature of the main line between southern California and Chicago was the objective. Line above has been superseded by line below.

when major multi-year plant-improvement projects must also be taken into account.

A second factor is one tinged with irony. For a long time, just about everybody interested in the long-term future of the industry has been talking of the need for better service and better equipment utilization. Now, it would appear those service and utilization improvements are actually coming—and they're having their effect on the equipment market. BN President Robert W. Downing makes it clear what this means: "At today's prices, each 1% increase in utilization of BN's car fleet is equivalent to $18 million worth of additional equipment." Tied in, too, is the fact that railroads have made great strides in fleet improvement through the past decade. Last year, for example, the industry's net investment in freight cars added up to $7.6 billion—up 95% from 1961. Over the same period, average per-car capacity has gone up sharply—and total carrying capacity has climbed by about 8% even though the number of cars in the fleet has gone down by approximately 12%.

Still another factor comes into play when you consider individual-railroad improvement programs over a spread of years. If past programs have been substantial, a road can generally take a cutback without doing itself damage. Take Chessie System: capital expenditures were down in '72 and probably won't climb much in '73. But C&O/B&O has been among the leaders in improvement-spending for years. By the reckoning of President Hays T. Watkins, Chessie has spent more than $1.33 billion in the past 10 years—for such things as 100,000 freight cars, about 1,000 new locomotives, and 2,500 track-miles of new mainline rail.

● **The whole industry.** For 1973 and beyond, then, taking the industry as a whole, it's no easy task to forecast the levels at which railroads will be buying. It's even more difficult to predict the impact of new cost pressures, or to put meaningful numbers to the effects of improvements in motive-power and freight-car utilization. And, as usual, the experts are divided as to the scope and the length of the current buildup of the economy—and as to how railroads, in competition with other forms of transportation, may share in the buildup.

One important area where there does seem to be fairly firm optimism, however, is the area of government involvement—involvement growing out of Astro and the legislative translations of Astro. As one insider notes, "For railroads, reading the record of the 92nd Congress is like starting a terrific story in a magazine and then finding out—unexpectedly—that it's continued in next month's issue." But, there *are* positive feelings about the 93rd Congress.

Richard E. Briggs was executive director of Astro; now he's assistant to the president and director of information and public affairs at the AAR. And he's numbered on the side of the optimists for a number of reasons.

● **Cause for optimism.** First, he points out, there is the massive support which raillied to the Surface Transportation Act—from the various transportation modes, from users and suppliers, from labor and even, finally, from the Administration. "Wherever the support came from, and whenever it came, the fact that it came at all indicates a new willingness to compromise on the part of all concerned," says Briggs. "Every group had its own ideas about what might be best for the transportation industry. In another time, each might have gone its separate way—denying support to any legislation that didn't promise to fulfill 100% of the goals of each particular group. But not this time. This time everybody came to recognize that the need for action in at least some areas transcended traditional barriers of competition and opposition."

Briggs concedes that the story of the 92nd Congress had a disappointing ending. But, he adds, "It is a disappointment that must be tempered by rising hopes for the installment of the story that will appear in the 93rd Congress. For the first time in decades, the United States Congress has taken a long, hard look at the railroad industry and at other elements of freight transportation. And for the first time in history, a powerful coalition of support—a coalition of forces which have at times been bitter opponents of each other—has been forged behind a single, comprehensive piece of legislation."

On the House side, at least, there are indications that transportation legislation will get early consideration. And, Briggs concludes, "With the support now present and with the apparent awareness on the part of Congress of the need for action, we are highly optimistic about the chances for early passage" of an STA similar to the one acted upon by a House subcommittee (but not by the full Committee on Interstate and Foreign Commerce) in the 92nd Congress.

● **Congress can help.** If Congress comes through, and if the broad forecasts for increased transportation demands in the '70s are accurate, then the mini-trend in railroad-improvement spending now under way may turn into a full-blown upward surge. The need will be there—and Congress, by taking various steps outlined in the STA, can help the industry meet the need.

In the meantime, what will railroads be doing? Frisco President Richard C. Grayson may have summed it up best, at this year's Railway Progress Institute presidents' panel. He spoke for Frisco, of course—but his comment could be extended on behalf of much of the industry: "We'll spend more than we can afford, but only half of what we really should. Every dime possible... will be budgeted for capital improvements." ■

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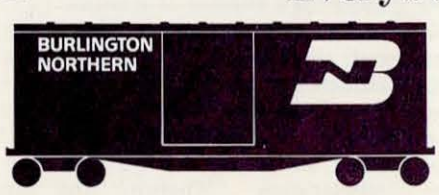

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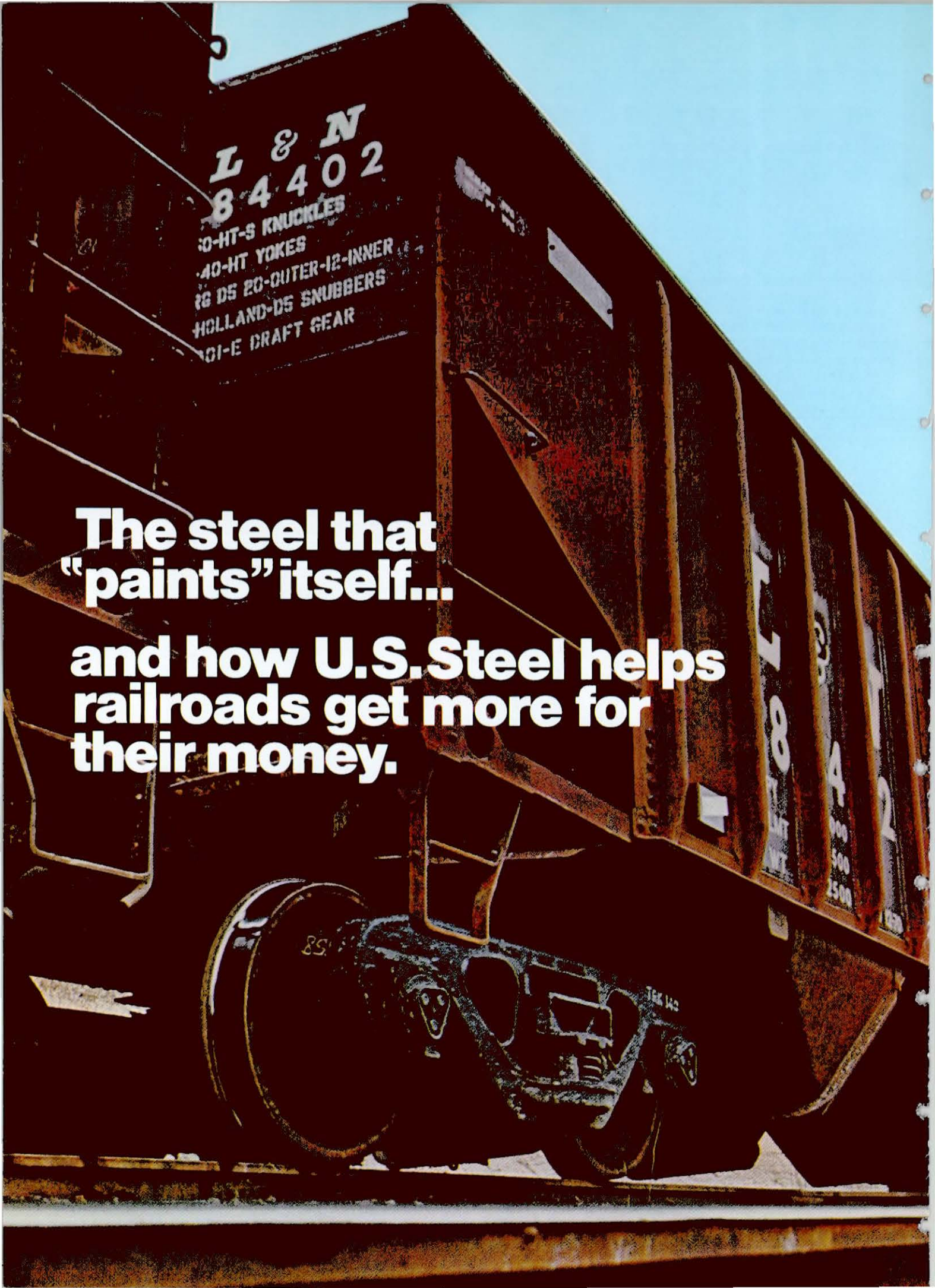

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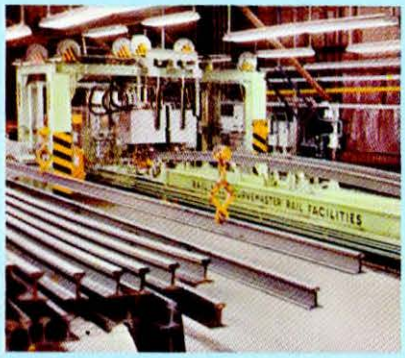

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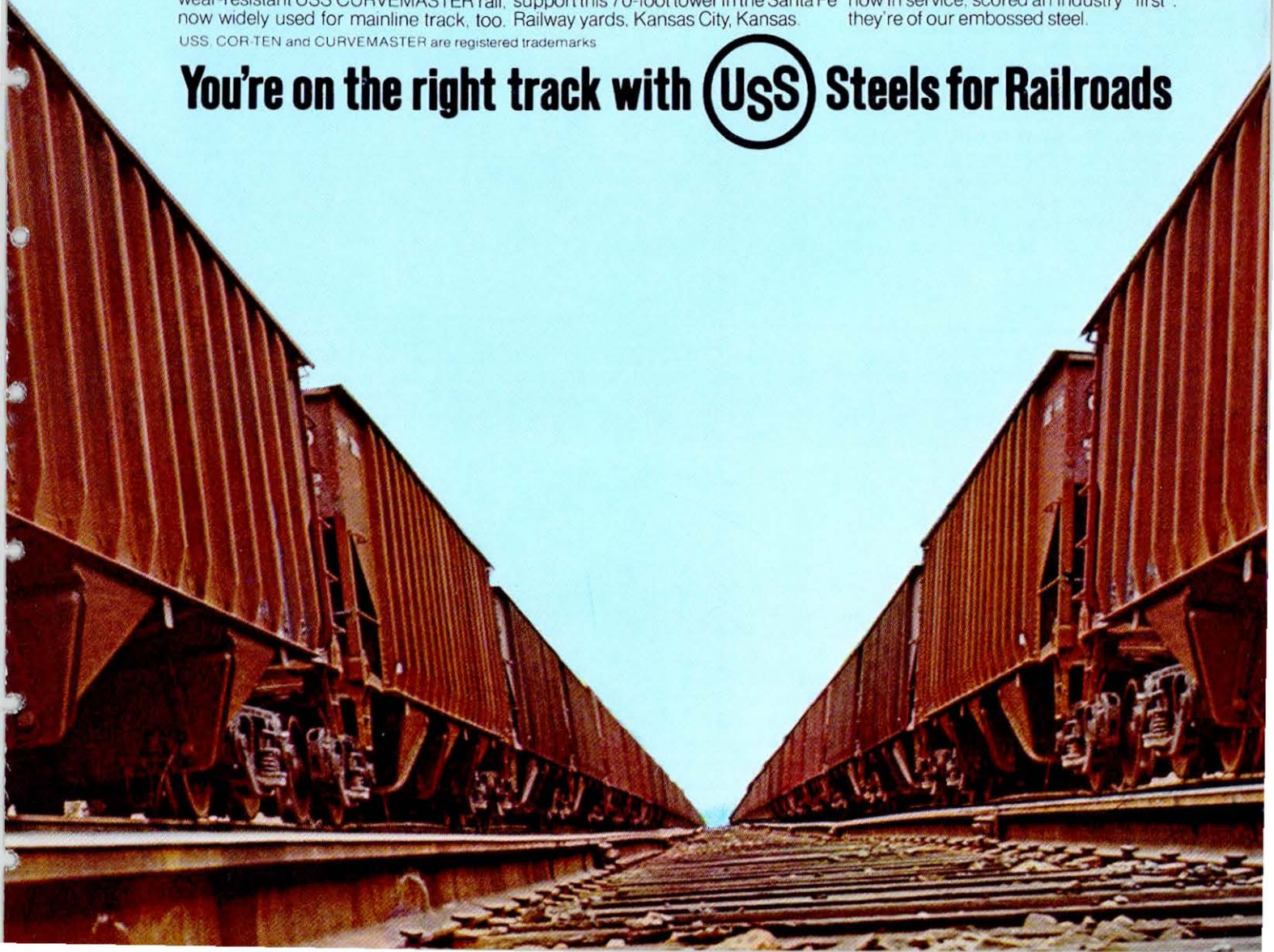
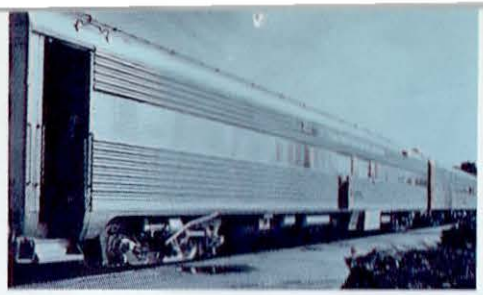




AIR BRAKE TRAINING CAR (foreground) is the latest addition to Santa Fe's mobile college for locomotive enginemen. It teams up with the locomotive simulator car (right) and together they can deliver this specialized training to the far reaches of the 13,000-mile Santa Fe system.

Santa Fe's "college" for enginemen:

By ROBERT D. BARTLEY
Associate Editor

Santa Fe's college for locomotive enginemen has no ivy-covered halls or towering oaks, no co-eds (except in one instance), nor any of the amenities and fun-filled distractions that normally accompany college life. It doesn't even hold the traditional "Pomp and Circumstance" march on graduation day. Yet, this most unusual "college" has 209 graduates—with more to come—who probably would not trade one hour of their training experiences for any of the multitude of fringe benefits that go along with a regular college education.

● **Three-car school.** The engineman college is a no-nonsense, 240-hour training course that is structured to develop what one Santa Fe supervisor describes as "the best damned locomotive enginemen in the country—or the world, for that matter." Housed in a three-car consist that can lift anchor and be ready in less than an hour to travel to the far reaches of the 13,000-mile Santa Fe system—via its own special train, or even by the road's crack freight train, Super C—the college represents a major stepping stone toward getting what many feel is one of the most satisfying jobs any railroad can offer.

Aside from its mobility, the feature that puts the Santa Fe training program in a special category that only two other railroads can share is its locomotive simulator. This remarkable Link-built trainer can duplicate with amazing accuracy virtually all the sights, sounds and movements encountered in a locomotive cab in regular train operation. Students receive a minimum of 14 hours of personalized instructions in the cab.

Introduced in September 1969, the $750,000 Santa Fe simulator was the first such training device to appear on any U.S. railroad. (Later, Southern Pacific introduced its $1-million simulator, a fixed facility device built by Conductron-Missouri. Still later, Seaboard Coast Line added three mobile trainers built by its own technicians.) The Santa Fe simulator is installed in a former chair-club car plucked from the Santa Fe's passenger car fleet long before Amtrak began making its car selections.

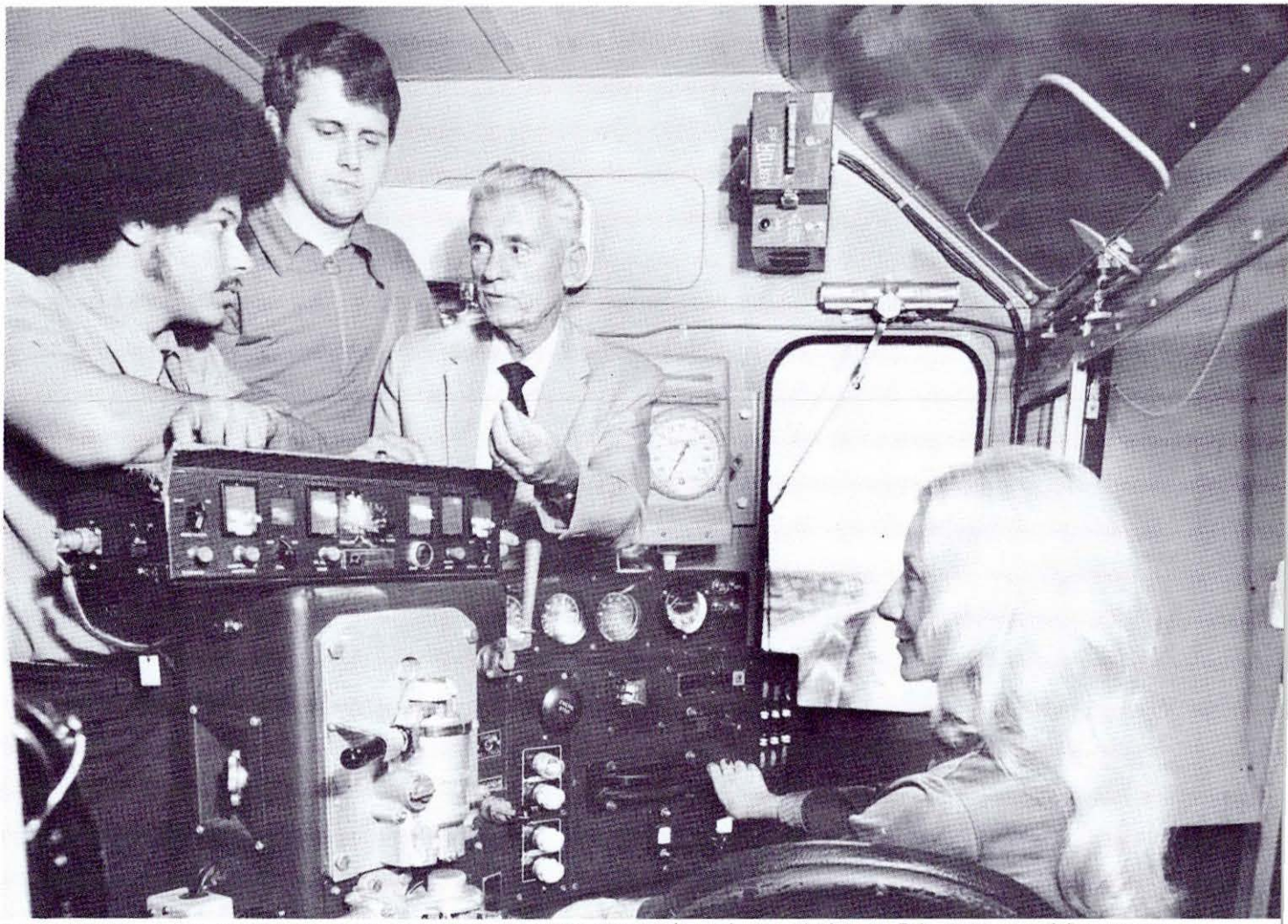
AIR BRAKE INSTRUCTOR Max Smith explains the functions of 26L brake equipment components to one of the special management classes which have attended the engineman college. The final examination in the course is oral and it lasts eight hours.

The second car—and the latest addition to the training program consist—is the air brake training laboratory. The remaining car, a former business car, doubles as a records and storage room and as the filming car for recording the scenes which appear in the simulator's visual system.

● **First, a system tour.** The mobile training school held its first session in October 1970 in Temple, Tex., after the simulator had been taken on a whirlwind 3,000-mile, 23-day introductory tour of the system. Dean of the school then—as now—was Will Ambrose, a 33-year Santa Fe veteran. Ambrose was at one time a fireman, then an engineman, and eventually an assistant to the superintendent-air brakes at the time he assumed the enginemen training job.

Since its introduction, the simulator has had 110 of its trainees graduate and go on to become enginemen. Another 99 yard service enginemen have upgraded their skills to the level where they qualified for road service. Another 27 management-selected employees (including the school's only co-ed thus far) have attended special accelerated classes aimed not at grooming them to become enginemen (or -women) but, instead, at acquainting them with the rules and mechanics of train handling and with such things as the functions of air brakes and locomotive components. In sharp contrast to the engineman training

209 alumni–and more on the way



FINER POINTS of train handling are explained to students by Will Ambrose (center), "dean" of Santa Fe's simulator training program.

classes, which extend now over a six-week period, these special classes have been condensed to just one week.

Santa Fe figures the cost of the six-weeks' training is $3,200 to $3,300 per student. Since its inception, the engineman college has been choosing students from employee ranks. Yard and road firemen with at least one year's experience, plus at least 60 main-track road trips, have made up all the engineman training classes held thus far.

● **Lots of homework.** Aside from the minimum of 14 hours a student will spend in the simulator's cab seat, the 240-hour engineman training course covers such diverse subjects as 6, 24RL and 26L locomotive brake equipment, brake system charging, locomotive operating controls, cab check-out procedures, main-lining a train, preparation of duty forms and accident-injury reports, starting and stopping complex trains, passenger train rules and operation of trains with remote-controlled equipment. Close to one-third of the training time is spent on operation rules. Another 24 to 36 hours are devoted to on-the-job training on road trips.

Exams are held at least once a week, and they are tough. The final exam, for example, is strictly oral and it lasts for eight hours. About 10% of the trainees have "washed out," advises Ambrose. "We require our students to score at least 80% in the written and oral tests. If a student should fail, however, he still has a chance to qualify. What he's required to do is write to us within 30 days after failing and request a re-examination. Or, he can wait for the simulator to return to his district and again take the portion of the course he failed in. In either case, he'll take the exam again, and if he passes, he'll qualify for an engineman's job."

It is extremely important, too, that

(Continued on page 26)

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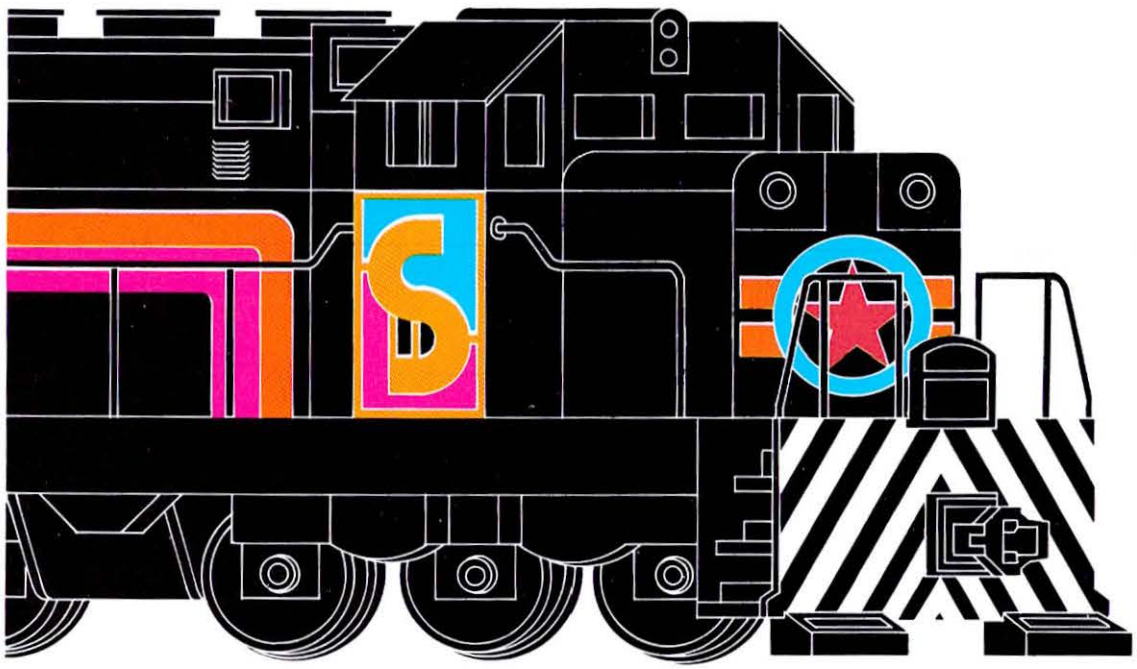

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ENGINEMAN TRAINING COURSE involves a lot of homework and covers a variety of subjects related to locomotive operation and train handling. Written tests are given each week.

(Continued from page 23)

the applicant for the course be physically fit. There have been cases where firemen have been washed out because of disabilities. Ambrose recalls one potential student who scored unusually low in a battery of eye tests. Further examination brought out the fact that at one time he had been totally misfit for eye-glasses, and as he admitted later, he suffered severe headaches almost constantly. Sadly, although a new pair of glasses corrected his perception problem, it was found he did not have sufficient color perceptiveness to qualify for the engineman course.

● **Santa Fe's "toughest" on film.** Successfully passing the simulator training portion of the course is no easy task. Captured on film for the simulator are six runs along varying sections of the Santa Fe system, including the 25-mile run out of Williams, Ariz., on the Grand Canyon line, a notoriously difficult stretch of track. "This run has 21 miles of real workout for an engineman," says Ambrose. "He's got 3% [grades] up, 3% down, several curves mixed in—there's no other place on the railroad with such abrupt changes, and there's no other place where a student can gain such excellent experience in train handling."

Other runs programmed into the course are:

Taiban to Clovis, in eastern New Mexico; Fox to Domingo, also in New Mexico; LaPlata to Marceline, Mo.; Flagstaff to Williams, Ariz.; yard switching in Temple, Tex.

More than anything else, it is the simulator's visual subsystem that transforms the synthetic into the "real thing." Film quality has been improved considerably since the simulator's introduction three years ago. When other subsystems, like sound and motion, begin working on the senses, and the gauges and indicators on the control stand begin to move, and when the Alertor electronic safety control begins sounding its warning, and you have 150 computer-created cars loaded with merchandise freight trailing you down a 2% grade, and your brake pipe pressure is falling—maybe it is just fantasy, but, still, the palms will get sweaty. "But, isn't it a whole lot better for a student engineman to have one of these trains get away from him, rather than have it happen to him while on the job?" asks Ambrose, and who can argue with that point?

Even those enginemen who undergo training in the simulator to upgrade their skills discover quickly that there are a lot of things they may not know about handling trains. As Ambrose points out, the majority of these enginemen have only yard-switching experience in the locomotive cab seat. "They've had limited experience picking up wayside signals, which is an extremely important part of road operations, so we'll let them run a few amber and red signals while in the simulator cab. They quickly learn to pick out these signals after they've been in a couple of our simulator accidents."

The ultimate objective of the engineman college is to graduate men with the best qualifications to operate locomotives and handle trains in a safe, efficient manner. Standardization of instructions, Santa Fe feels, is the key to reaching this goal, and the mobile college with its all-important simulator is the best way to achieve standardization. The day will surely come when enginemen assigned to eastern areas of the Santa Fe system will be operating locomotives and handling trains in virtually the same manner as their counterparts in the western districts. It is probably true, Santa Fe feels, that some of today's veteran enginemen still carry with them some of the bad operating habits developed over the years. Now, only the good habits are being drilled into prospective Santa Fe enginemen.

● **By the book is the best way.** As trainees quickly learn during the time spent in the simulator, there is little room for the maverick, for individual flair or the personal touch in operating locomotives and handling trains. One must go pretty much by the book, observe signals, honor the speed restrictions and be alert. The National Transportation Safety Board indicated earlier this year in a study, "Train Accidents Attributed to the Negligence of Employees," that the No. 1 cause of accidents in terms of severity is "disregard of stop signals." Little wonder that Santa Fe places such strong emphasis on signal observation during simulator training. Ranking second among accident causes according to the NTSB study is "excessive speed in other than yard limits."

Santa Fe instructors are aware of the problems which failure to heed speed restrictions can create. A mere push of a button on the simulator's computer control console can quickly inject a real-life problem into a program for a student who has neglected his speed instructions for a particular run and he finds himself in a situation he can't wiggle out of. That's when Ambrose will ask, quietly, "Aren't you glad this isn't the real thing?"

● **Not without problems.** As Santa Fe will admit, there have been a few problems with the simulator. The signal spots projected on the screen often were way off target early in the program. Although this system is not yet perfect, it is vastly improved. If the spot is off target, it is off only slightly, and this mild imperfection does not detract from the simulator's over-all excellence. Also, there have been malfunctions in the computer, but they have never been serious enough to put the simulator out of action for long. Film quality, which at first was only fair due to excessive graininess, is much better and the filming technique is now nearly perfect. (During the filming of the Grand Canyon line run, four deer crossed the track and they are now a permanent part of the simulator training. It is not unusual for trainees—or anyone else seated in the cab seat, for that matter—to react to this scene with a couple of warning blasts from the simulator's horn.)

Generally, the simulator—and the training program it is an important part of—are producing the results Santa Fe had hoped for when it decided to invest $750,000 in something that had never before been tried in the U.S. If anything, results may be exceeding expectations. And, if testimonies given by road foremen of engines on the performances of simulator-trained enginemen they have observed represent any kind of bellwether, the simulator does not have to prove its worth anymore. It's in. ■

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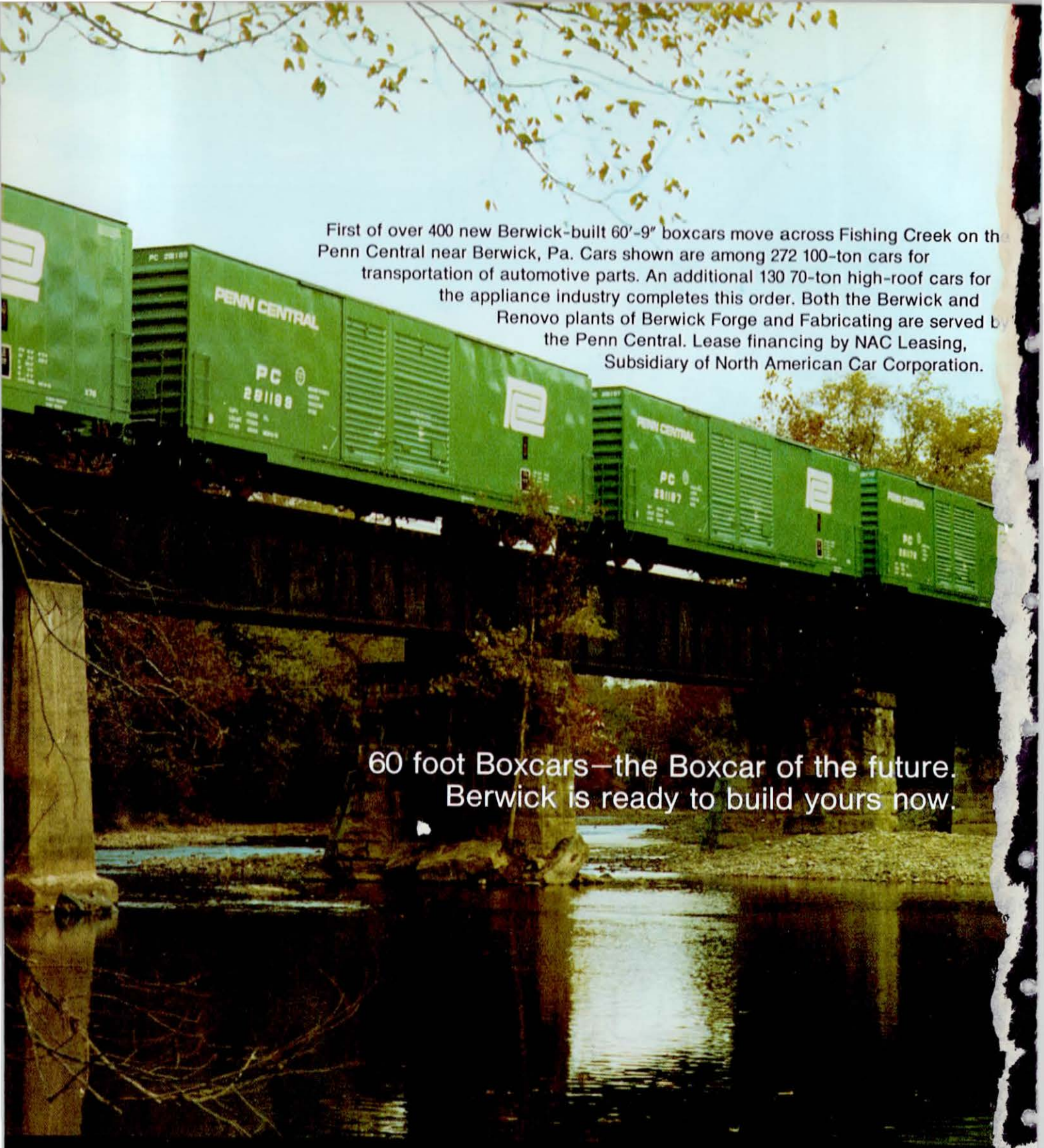

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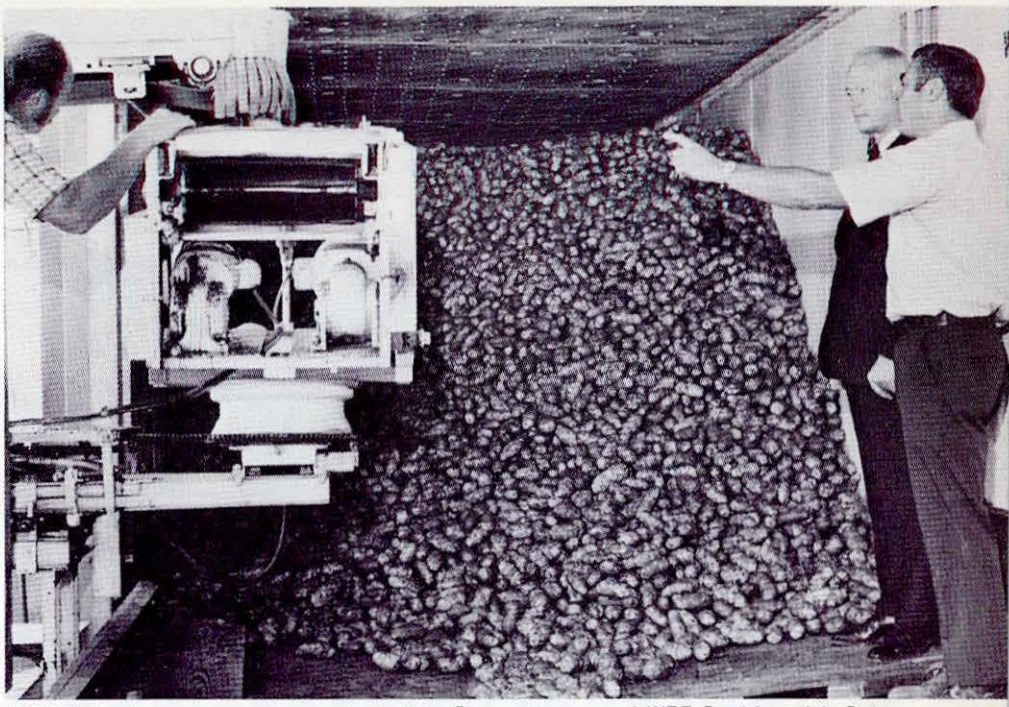


LOADING of prototype car was checked by Pasco shippers and WFE President J.J. Quinn (second from right). Conveyor for loading reaches from doorway to car end.

Western Fruit Express, a Burlington Northern subsidiary, recently completed conversion of 100 mechanical refrigerator cars for bulk potato service. With standard ice refrigerator cars being phased out of service, shippers of potatoes and similar perishables have been increasingly concerned about the future car supply for their products.

What they have gotten from WFE is a car suitable for handling potatoes in bulk, bag or box, as well as other perishables. WFE's all-purpose design represents an $8,000 modification of an existing 50-foot, 70-ton mechanical car. In the rebuilding, each car got new floors and conveyors for potato service, and a new diesel engine and new lining.

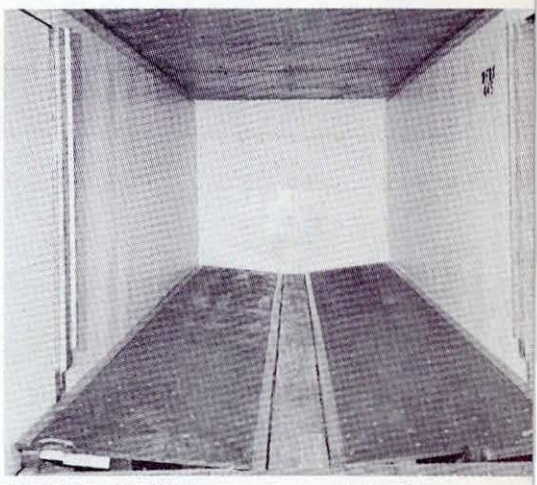
BN introduced the first two cars at Pasco, Wash. Since then they have been operating not only out of that area but also from the Red River Valley further east. Shippers have been enthusiastic, according to WFE reports. J.J. Quinn, president of WFE and affiliated Fruit Growers Express, was on hand for the initial loading of the cars at Pasco and has since kept close check as conversion proceeded at shops in Hillyard, Wash., and Alexandria, Va.

● **Proven concept.** The conveyor-equipped refrigerator car for bulk perishables is not a new concept. Several hundred ice cars were converted for bulk potato service some years ago and continue to fill specific shipper needs. It was the experience gained in operating that type of car that led to the mechanical car conversion with the idea of eventually replacing the ice types.

Among the advantages over the RS (or ice) car is the greater load capacity and the automatic control of temperatures. While RS cars handle 60,000 to 70,000 pounds of potatoes, the RP (or mechanical) car handles 100,000 pounds regularly and bulk shipments exceeding 105,000 pounds have been made.

The car has a longitudinal chain conveyor 8½ inches wide extending from each end wall to a transverse well across the doorway area. Conveyors and the transverse well are beneath cover boards which are progressively removed as unloading proceeds. Floors, designed to be raised at the sides to provide slope to the conveyor for bulk loads, may also be placed in a completely horizontal position when the car is set up for conventional service. No special tools are needed.

ADJUSTABLE FLOOR, when horizontal, permits car to handle cartons.

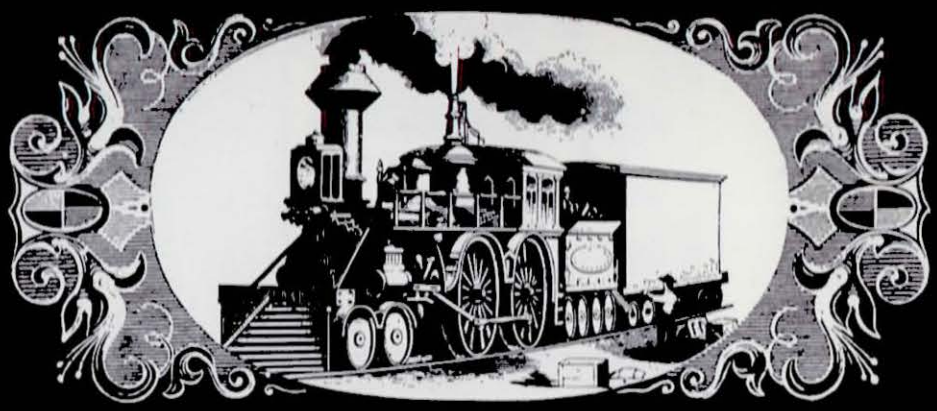


SLOPING FLOOR feeds bulk load to built-in conveyor under cover boards.

● **Loading procedure.** The shipper provides the loading conveyor which extends in through the doorway and can reach the car ends, being also capable of raising and lowering so potatoes may be deposited at any level without bruising and so the cube of the car may be fully utilized.

For unloading, the receiver places his own transverse conveyor through the doorway and in the well where the car's own conveyors may unload on it. The receiver also provides a motor with gear box and shaft terminating in a quick-connect drive coupling. This power system serves to actuate the car's built-in conveyors. The normal procedure is to have a man in the car during unloading to observe movement of potatoes to the conveyors and at times assist in feeding them properly. He also removes the cover boards.

Response to the cars has taken the form of inquiries from shippers concerning WFE/FGE plans for the conversion of additional cars. The precise temperature control is attractive since the condition of the load on arrival can be exactly established for the type of processing for which the potatoes are scheduled. The car also helps control costs for both shippers and receivers, because of the ease and speed of loading and unloading. Investment in bags or cartons is eliminated, along with the time and labor required for such packaging. ■



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November Traffic Poll

Shippers give railroads mixed marks on marketing

A number of shippers are willing to award railroads an "A"—plus or minus—for their efforts in the still-new school of marketing. But a majority of those participating in Railway Age's November Traffic Poll—28 out of 42—say bluntly that railroad marketing men have, so far, flunked the course.

The biggest single complaint is that "marketing men" are not always that at all, but too often are old-line railroaders wearing fancy new titles. Others grumble that railroads still can't back up their marketing pitch with service and equipment. Some complain that marketing, as presently practiced, appears to be a one-way street with all signals favoring the carriers.

But with a single exception (a mid-western food shipper who says he himself took a university marketing course, and found the whole exercise to be hogwash), the big, medium-sized and small shippers participating in the Railway Age poll heartily approve of the fundamental concept; they would only like to see it practiced more widely and more efficiently.

● What's right: A minority opinion. The plus vote, while small, is far from unimpressive. The experience of such shippers as L.C. Philips, traffic manager of Riviana Foods, Houston, shows what marketing can accomplish.

Says Philips: "The rail carrier had lost virtually all movement of rough rice from our Arkansas elevator to our Memphis plant because of lower exempt rates. One carrier marketing representative approached us and after some lengthy negotiating placed in effect hopper car rates competitive with exempt truck. This has recaptured much of the tonnage previously lost. Another carrier has just initiated a proposal to capture tonnage now moving by truck. Although I have not always got what I wanted, I have found the carriers always receptive to looking into any proposal, and, if profitable to them, to place it in effect."

A sampling of other "yes" votes on the effectiveness of marketing (some of them of the "yes—but" variety):

Miles F. Tamisiea, general traffic manager, Theo. Hamm Co., St. Paul, Minn.: "Marketing has recaptured some of the business railroads have lost over the years, though they have only scratched the surface. They must speed up the process."

W.E. Maley, manager of distribution, U.S. Borax and Chemical Corp., Los Angeles: "Marketing has made it easier to accomplish some of our objectives because carriers are more sensitive to our total requirements [but] they haven't completely coordinated their sales, service and rate-making."

Phillip T. Catalano, traffic and distribution manager, Steelcase, Inc., Grand Rapids, Mich.: "Pricing barriers are beginning to fall and innovations are taking place—but it may be too late for our company. Managements in some cases seem hesitant to try new and innovative services. Too often the selected course of action is to apply existing service, equipment and schedules to a lower price. This is all too frequently not the correct solution or best answer to a unique marketing problem. The changes that are taking place are coming too slowly and with but a few selected and progressive railroads. More has got to happen and fast or it may be too late for the industry."

D.J. Osbjornson, director of physical distribution, Lamb-Weston Inc., Portland, Ore.: "Marketing has produced emphatic improvement to the mutual advantage of carrier and shipper. But railroads have not made a total commitment to the objective. They have not 'sold' the concept to all employees. There is evidence of internal strife, which is not unexpected."

G.E. Mayfield, manager of traffic, American Oil Co., Chicago: "We have noticed that railroad personnel have displayed a greater interest and aggres-

Railway Age asked:

How has the rising emphasis on marketing affected your relationship with railroads?

Where have railroads fallen short in implementing the marketing concept?

Does marketing have sufficient top-level support from railroad management?

"Pricing barriers are beginning to fall, innovations are taking place —but it may be too late"

Phillip T. Catalano, Steelcase, Inc.

"All too often the marketing manager has only advisory authority, and is not the decision maker."

P.W. Pollock, Fibreboard Corp.

"Railroads have failed to analyze our specific problems and suggest improvements."

R.A. LaVigne, Hiram Waker & Sons.

◀ Circle 6 on coupon page 57

siveness towards handling our shipments. At the same time, they are exerting more pressure on their operating people to improve or at least maintain good service." However, Mayfield feels there is room for improvement: "The railroad forces seem to be too compartmentalized. The sales people have very little authority in the freight rate area. Freight solicitation should include the price and service aspect. The rate staffs of the railroads seem to be a little too independent and arbitrary, which has not helped their respective companies' image."

D.C. Ward, director of transportation, Hoerner Waldorf Corp., St. Paul, Minn.: "In some cases marketing has given us a one-entity contact point for the various problems of service, car supply and rates [but] sometimes the title doesn't mean all that much and the people are just solicitors."

J.W. Cassell, district traffic manager, Reynolds Metals, Sheffield, Ala.: "Marketing has made the railroads more service minded. But there still needs to be improvement in transit time."

E.J. Hanson, director of transportation, Grand Forks (N.Dak.) Chamber of Commerce, Red River Valley Potato Growers Association: "Railroads are more willing to listen to traffic promoting ideas. [But] it doesn't do any good to publish rates, get equipment, and hold meetings for the purpose of developing traffic if the same worn out equipment is put into service and the traffic has erratic, uncertain times in transit. Our railroads here are doing a better job."

J.D. Robins, director of traffic, Caterpillar Tractor Co., Peoria, Ill.: "Marketing has increased our use of piggyback."

B.S. Molnar, traffic specialist, Whitehall Laboratories, New York, N.Y., says effective marketing has caused his company to divert "more and more tonnage from motor to rail, especially TOFC," but he would like more attention paid to "service, especially in origin and destination drayage."

C.C. Cory, transportation manager, pricing, Firestone Tire & Rubber Co., Akron, Ohio: "Marketing efforts have enabled some of the railroads to retain business they would have lost. [But] insufficient direction is placed on TOFC services and instituting new and better TOFC hot-shot specials. These could be the railroads' salvation."

● **What's in a name?** Henry M. Karel, director of distribution, Cleo Wrap Corp., Memphis, Tenn., says marketing has had "very little" impact on his own dealings with carriers, adding: "The personnel that the railroads are using are their old line employees. Regretfully, they have not been able to develop and implement and understand modern marketing concepts. The only time a railroad marketing man has been able to present new ideas and new ways of dealing with customers is when he is a new, young, and aggressive employee; I think the railroads should have more people of this caliber."

"After you wait so long, and you call so much, you decide to seek other modes"

J.R. Morton, Combustion Engineering

John P. Zumwalt, general manager of distribution and purchasing, Wilson Certified Foods, Inc., Oklahoma City, says he has noticed "no increased emphasis" by the railroads in marketing. "Some railroads have changed titles to give the appearance of a change but in actual practice they have remained the same," says Zumwalt. "Railroads still are making rate adjustments and directing their sales efforts to swinging business from one railroad to another instead of directing their efforts to obtaining new business now moving by motor carrier."

Stanley Parker, traffic manager, Pacific Lumber Co., Scotia, Calif., is another who believes that "marketing in many cases has become just another name for sales and is the same old game of trying to steal a car from some other railroads. There does not seem to be any meaningful effort to recapture tonnage lost to other modes of transportation."

"Marketing has produced emphatic improvement—but railroads have not made a total commitment."

D.J. Osbjornson, Lamb-Weston, Inc.

R.H. Heilman, corporate director of transportation and distribution, A.O. Smith Corp., Milwaukee, observes: "Some of the personnel chosen for the marketing department are not marketing oriented or trained, but are just transferred from other departments and assigned to this function."

Arthur M. Ribe, director of transportation services, Vulcan Materials Co., Birmingham, Ala. notes that "to the limited extent that the marketing concept has really taken hold, it has improved our relationships with the carriers. Merely, however, changing the title of a sales official or a rate-making official is not of much help."

● **Who's helping whom?** O.E. Andersen, general traffic manager of Penick & Ford Limited, Cedar Rapids, Iowa, suggests that marketing as it is now practiced "is dedicated to the concept of what can the shipper do for the carrier, instead of what can the carrier do for the shipper."

Similarly, J.J. D'Arcy, general traffic manager, Congoleum Industries, Kearny, N.J., feels that "to railroad men marketing means selling their product rather than helping me to sell mine."

Some other "no" votes on the effectiveness of railroad marketing efforts:

Patrick W. Pollock, director, transportation and distribution, Fibreboard Corp., San Francisco: "All too often the marketing manager of a particular industry or commodity has only advisory authority in the area of rate making and is not the decision maker."

Walter E. Morgan, manager-traffic control, Union Carbide Corp., New York, N.Y.: "Railroads must get marketing out of the talking stage and into the action stage—give marketing managers some muscle."

W.E. Harvey, general traffic manager, Swift Fresh Meats Co., Chicago: "Generally, railroads fail to follow the fundamentals of marketing analysis, i.e.: 1. Where and how much is consumed? 2. Where is it produced and at what volume? 3. How is it transported? 4. What is required to meet or beat present service and at what cost?"

John King, general traffic manager, Georgia Pacific Corp., Portland, Ore.: "Marketing men should get more information on the subject before contacting shippers."

R.E. Alexander, vice president, Pillsbury, Minneapolis: "Most emphasis seems to be directed toward the concept rather than toward actual implementation of an effective marketing effort. Adequate profit-and-loss responsibility has not been given the marketing manager."

E.M. Burk, traffic manager, Wyatt Division, U.S. Industries, Inc., Houston:

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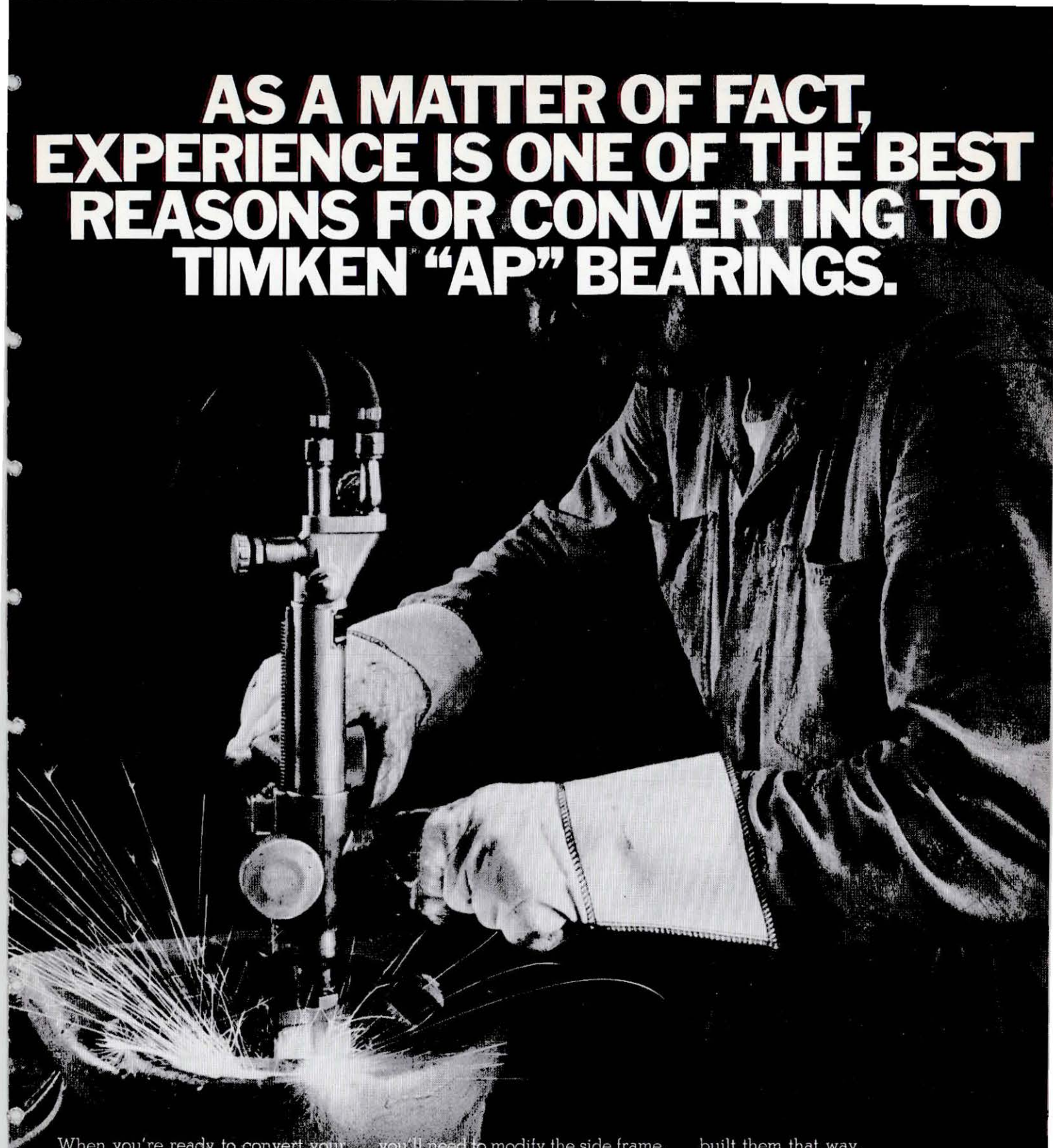

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Second Quarter Figures of Calendar Year 1972

(Dollar figures are stated in thousands: i.e., with last three digits omitted)

Name of Road		Operating Revenues				Operating Expenses												Railway tax accruals	Railway operating income		Net income	
						Maint. of Roadway and Structures			Maint. of Equipment							Operating ratio						
		Freight	Other	Total 1972	Total 1971	Total 1972	Total 1971	Deprec. and Retirements	Total 1972	Total 1971	Deprec. and Retirements	Traffic	Transportation	Total 1972	Total 1971	1972	1971		1972	1971	1972	1971
Akron Canton & Youngstown	3 mos.	1,914	63	1,978	2,072	402	576	28	388	412	124	89	795	1,793	1,958	90.6	94.5	232	–46	109	32	17
	6 mos.	3,513	102	3,616	3,747	635	811	45	731	811	249	180	1,489	3,282	3,482	90.7	92.9	458	–123	–180	57	136
Amtrak	3 mos.	–	32,136	32,136	22,646	589	1,035	–	15,200	11,176	1,792	4,783	31,963	74,095	42,225	194.3	186.5	4,401	–40,361	–21,938	–42,187	–22,656
	6 mos.	–	74,430	74,430	22,646	2,675	1,035	–	32,817	11,176	3,262	9,090	63,801	146,491	42,225	196.8	186.5	8,680	–80,741	–21,938	–84,547	–22,656
Ann Arbor	3 mos.	2,849	106	2,955	2,626	344	294	24	603	517	161	57	1,486	2,608	2,407	88.3	91.7	206	141	18	–369	–348
	6 mos.	5,354	181	5,536	5,141	713	574	48	1,166	1,009	326	120	2,924	5,148	4,690	93.0	91.2	418	–30	49	–1,012	–782
Atchison, Topeka & Santa Fe	3 mos.	196,366	8,622	204,988	198,591	35,979	33,879	3,164	42,297	38,272	10,825	4,995	72,846	165,411	156,985	80.69	79.05	18,693	20,884	25,271	16,211	19,581
	6 mos.	381,914	17,578	399,492	390,299	63,409	59,951	5,965	82,387	78,231	21,556	9,663	142,493	316,617	308,389	79.25	79.01	37,132	45,744	47,187	34,007	34,740
Baltimore & Ohio	3 mos.	122,839	4,463	127,302	138,121	17,900	18,100	1,900	17,378	22,061	2,968	2,686	47,561	93,887	100,959	73.8	73.1	9,287	24,127	27,878	6,080	7,366
	6 mos.	236,907	7,442	244,349	263,166	32,900	33,200	3,660	33,325	43,119	26,912	5,399	92,243	180,501	196,482	73.9	74.7	18,465	45,383	48,253	7,622	7,943
Bangor & Aroostook	3 mos.	3,421	181	3,601	3,442	972	924	77	1,341	1,127	464	80	1,062	3,708	3,374	102.9	98.0	600	–706	–241	473	646
	6 mos.	7,021	312	7,333	6,992	1,961	1,892	148	2,551	2,151	906	162	2,305	7,503	6,045	102.3	99.3	920	–1,090	–586	1,300	758
Bessemer & Lake Erie	3 mos.	12,380	1,061	13,441	15,943	2,314	1,473	147	3,501	2,634	501	177	3,290	10,370	8,747	77.2	54.9	1,709	1,361	3,783	1,236	1,278
	6 mos.	20,161	1,578	21,739	24,617	3,618	2,580	385	6,289	4,670	1,050	353	5,768	18,088	15,609	83.2	63.4	2,195	1,457	4,841	3,219	4,412
Boston & Maine	3 mos.	16,935	3,174	20,109	19,031	3,748	2,815	484	3,477	3,329	611	384	9,007	17,691	15,914	88.0	83.6	1,580	838	1,578	1,687	1,271
	6 mos.	32,875	6,370	39,245	38,244	7,467	5,995	1,003	6,635	7,014	8,694	6,635	17,779	34,715	32,910	88.5	86.1	3,155	1,375	2,283	3,789	3,903
Burlington Northern	3 mos.	243,580	11,212	254,792	239,543	42,197	36,696	5,513	46,519	44,406	11,835	6,309	101,947	212,307	194,125	83.3	81.0	21,516	20,969	24,775	10,228	12,809
	6 mos.	461,847	20,998	482,845	456,685	74,517	65,956	9,545	87,303	85,469	22,679	12,371	195,949	399,599	383,487	82.8	84.0	42,608	40,638	32,778	16,989	12,492
CPR Lines in Maine	3 mos.	2,169	74	2,243	1,955	405	384	65	504	463	47	67	811	1,949	1,788	86.9	91.5	95	199	79	–	–
	6 mos.	4,431	176	4,607	–	912	763	129	964	846	94	127	1,615	3,931	3,552	85.3	92.0	189	487	135	–	–
Central of Georgia	3 mos.	20,570	473	21,043	18,570	3,248	3,619	314	3,178	2,938	972	401	362	13,596	13,112	64.6	70.6	3,055	4,392	3,096	3,062	1,893
	6 mos.	39,882	1,014	40,896	36,610	6,862	6,672	827	6,242	5,609	1,918	763	718	27,012	25,089	66.1	68.5	5,758	8,126	6,220	5,703	3,947
Central RR of New Jersey	3 mos.	7,604	2,843	10,447	13,961	1,360	1,583	210	1,837	2,327	278	196	5,489	9,899	10,910	94.8	78.1	966	–417	1,965	–912	–442
	6 mos.	16,136	5,821	21,957	27,663	2,818	3,171	492	4,122	4,295	583	414	11,688	21,044	21,501	95.8	77.7	2,065	–1,152	3,991	–5,159	–1,192
Central Vermont	3 mos.	2,377	153	2,529	2,499	528	476	41	227	174	45	26	1,065	1,912	1,602	75.5	64.1	198	419	748	188	603
	6 mos.	4,710	234	4,953	4,628	1,016	1,014	91	416	423	51	51	2,065	3,700	3,489	74.6	75.3	389	864	786	563	921
Chesapeake & Ohio	3 mos.	111,735	4,289	116,024	132,058	16,200	17,700	1,540	20,420	24,341	6,269	2,347	43,351	89,533	98,016	77.2	74.2	11,248	15,243	20,565	10,076	12,329
	6 mos.	222,586	7,547	230,134	250,440	30,000	32,000	3,078	40,159	48,329	12,482	4,805	85,091	174,679	191,305	75.9	76.4	21,743	33,712	35,386	19,978	20,818
Chicago & Eastern Illinois	3 mos.	10,521	121	10,643	9,171	2,393	1,792	76	1,918	1,865	377	304	3,215	8,272	7,556	77.53	82.39	854	1,516	1,289	489	412
	6 mos.	19,851	294	20,144	16,942	4,024	3,187	184	3,679	3,377	729	628	6,374	15,559	13,775	77.24	81.31	1,604	2,981	2,472	1,055	819
Chicago & North Western	3 mos.	79,046	9,604	88,650	87,909	14,673	12,729	2,009	13,543	13,590	3,648	2,319	37,458	73,232	68,756	82.6	78.2	6,801	8,617	12,616	284	2,278
	6 mos.	155,564	18,373	173,937	168,146	25,481	23,570	3,868	27,819	27,647	7,899	4,465	74,776	142,796	136,597	82.1	81.2	13,296	17,845	18,713	87	–123
Chicago, Milwaukee, St. Paul & Pacific	3 mos.	76,009	5,160	81,159	75,003	15,518	12,913	1,793	13,088	12,746	3,025	2,157	32,531	67,936	62,191	83.7	82.9	6,862	6,361	6,410	–1,193	–2,440
	6 mos.	142,809	9,686	152,496	144,026	26,431	22,477	3,245	26,363	24,574	6,064	4,193	63,235	129,422	119,468	84.9	82.9	13,239	9,835	11,849	4,463	5,475
Chicago, Rock Island & Pacific	3 mos.	75,162	4,931	80,093	75,893	11,617	11,286	1,692	13,452	14,064	1,627	2,118	31,262	62,385	60,931	77.9	80.3	5,403	12,305	9,784	920	–2,406
	6 mos.	142,436	8,571	151,006	145,827	22,005	21,521	3,418	27,731	26,830	3,280	4,165	61,596	123,210	119,895	81.6	82.2	10,795	17,001	15,661	–4,980	–7,903
Clinchfield	3 mos.	11,376	60	11,436	9,456	1,229	1,062	81	1,891	1,580	651	289	2,922	6,686	5,974	58.5	63.2	854	3,896	2,644	–	–
	6 mos.	20,128	143	20,271	14,349	2,157	1,507	162	3,458	–	1,310	574	5,430	12,305	–	60.7	60.2	1,634	6,332	6,332	–	–
Colorado & Southern	3 mos.	6,685	184	6,869	5,954	632	643	43	1,033	1,001	407	19	2,321	4,376	3,996	63.7	67.1	581	1,912	1,304	–	–
	6 mos.	12,740	305	13,046	11,225	1,231	1,121	100	1,941	1,785	766	38	4,392	8,384	7,266	64.3	64.7	1,021	3,641	2,546	–	–
Delaware & Hudson	3 mos.	10,377	228	10,604	12,415	1,338	1,555	128	2,109	2,693	395	306	3,948	8,379	9,777	79.0	78.8	1,494	730	1,154	–709	274
	6 mos.	20,333	403	20,735	23,512	2,635	3,024	248	4,563	5,137	794	644	8,175	17,385	19,375	83.8	82.4	3,025	325	1,194	–1,193	–372
Denver & Rio Grande Western	3 mos.	26,965	600	27,564	28,106	3,700	3,241	445	4,338	4,518	1,385	975	8,593	19,295	18,458	70.0	65.7	4,394	3,875	4,290	4,291	4,151
	6 mos.	52,931	1,103	54,035	53,059	6,438	5,752	1,153	8,515	8,487	2,736	1,969	16,908	37,114	35,185	68.7	66.3	8,577	8,344	8,309	8,259	7,239
Detroit & Toledo Shore Line	3 mos.	2,002	125	2,127	2,129	194	198	12	338	326	116	71	679	1,420	1,379	66.8	66.3	381	326	406	206	249
	6 mos.	3,890	239	4,130	4,066	441	406	32	668	643	232	141	1,290	2,811	2,686	68.1	66.1	677	641	717	348	447

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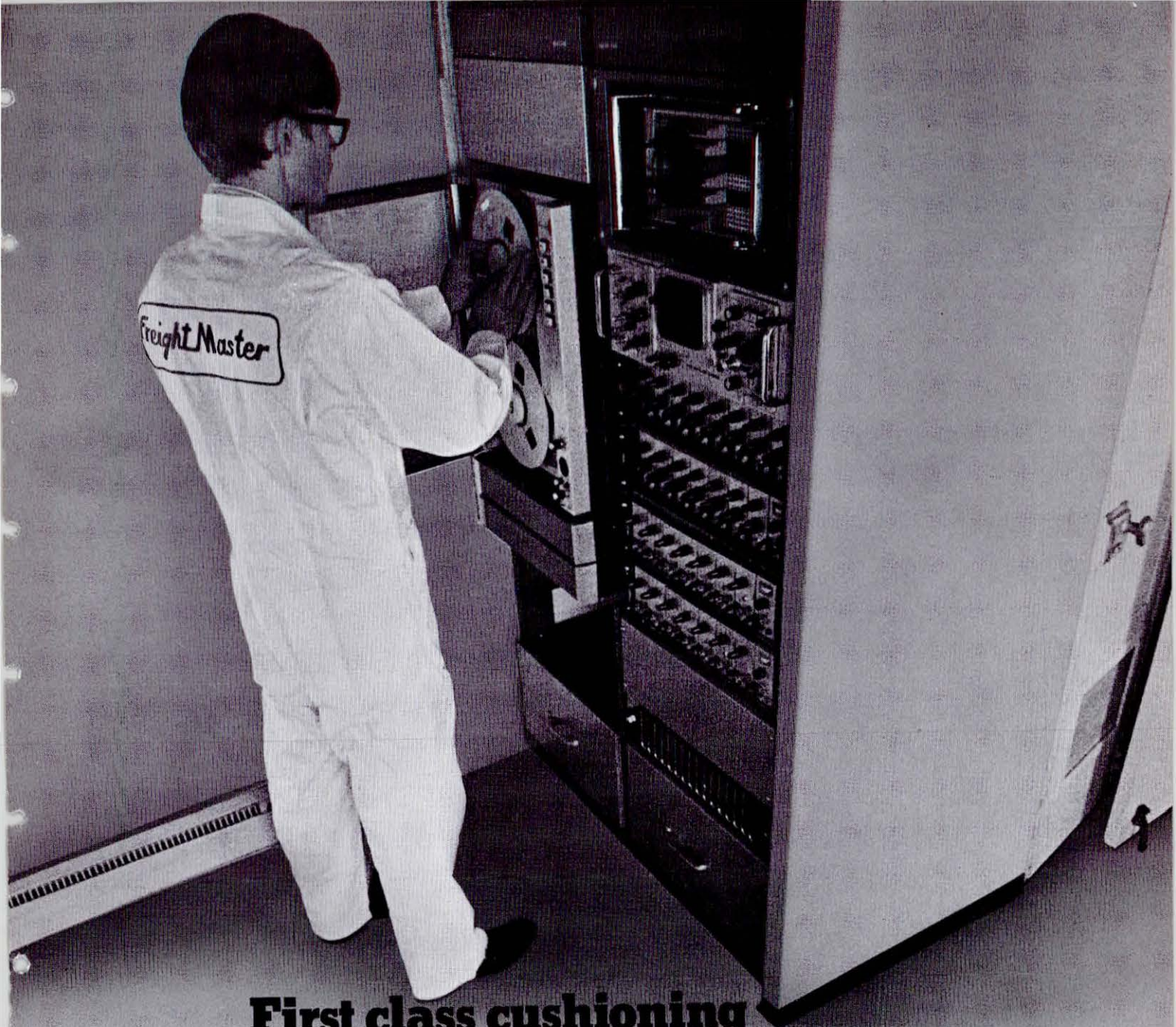

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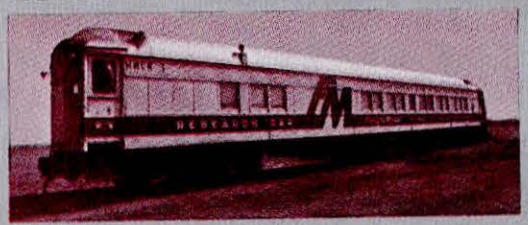

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Second Quarter Figures of Calendar Year 1972

(Dollar figures are stated in thousands: i.e., with last three digits omitted)

Name of Road		Operating Revenues				Operating Expenses												Railway tax accruals	Railway operating income		Net income	
						Maint. of Roadway and Structures			Maint. of Equipment							Operating ratio						
		Freight	Other	Total 1972	Total 1971	Total 1972	Total 1971	Deprec. and Retirements	Total 1972	Total 1971	Deprec. and Retirements	Traffic	Transportation	Total 1972	Total 1971	1972	1971		1972	1971	1972	1971
Detroit, Toledo &	3 mos.	10,386	225	10,612	9,634	1,051	944	98	1,885	1,908	426	272	3,753	7,610	7,032	77.1	73.0	759	2,243	1,880	1,062	848
Ironton	6 mos.	20,405	398	20,803	18,542	1,997	1,726	190	3,649	3,807	863	542	7,571	15,072	13,672	72.5	73.7	1,458	4,273	3,427	2,011	1,404
Duluth, Missabe &	3 mos.	11,973	1,297	13,270	15,984	1,636	1,646	319	1,777	1,823	563	70	3,471	8,065	8,200	60.8	51.3	3,302	1,902	3,300	2,150	3,815
Iron Range	6 mos.	16,508	1,448	17,956	20,268	3,372	3,008	868	3,539	3,371	1,128	137	5,639	14,900	14,359	83.0	70.8	2,920	136	1,653	875	2,939
Duluth Winnipeg	3 mos.	3,261	56	3,318	2,772	516	357	16	362	212	2	66	1,181	2,190	1,640	66.0	59.1	317	810	629	525	328
& Pacific	6 mos.	6,675	85	6,760	5,381	814	666	31	606	424	5	132	2,142	3,834	3,142	56.7	58.4	610	2,316	1,272	1,813	735
Elgin, Joliet &	3 mos.	13,174	6,051	19,225	20,095	1,916	1,538	133	2,964	2,491	544	234	6,874	14,021	13,731	72.9	68.3	2,952	2,252	2,954	1,714	2,416
Eastern	6 mos.	24,226	11,449	35,675	37,900	3,315	2,580	267	5,407	4,641	1,109	467	13,029	26,175	26,129	73.4	68.9	5,265	4,235	5,634	3,422	4,341
Erie Lackawanna	3 mos.	60,717	7,350	68,067	71,540	7,593	6,992	906	11,053	11,127	1,801	1,454	32,817	56,963	53,964	83.7	75.4	5,536	5,568	12,213	−9,869	2,702
	6 mos.	118,204	14,195	132,399	137,743	14,097	13,123	1,693	22,567	22,371	3,601	2,849	62,833	109,653	106,124	82.8	77.0	10,943	11,803	20,886	−12,761	1,824
Florida East	3 mos.	9,238	227	9,464	8,700	2,606	2,976	197	810	951	261	233	2,109	6,237	6,544	65.9	75.2	1,014	2,213	1,466	1,017	656
Coast	6 mos.	18,652	513	19,164	17,476	5,446	5,977	389	1,872	1,888	588	455	4,207	12,935	13,081	67.5	74.9	2,015	4,215	3,091	2,158	1,309
Fort Worth &	3 mos.	6,209	134	6,343	5,692	951	824	75	693	629	118	70	2,722	4,846	4,603	76.4	80.9	365	1,131	861	−100	−155
Denver	6 mos.	11,944	270	12,214	12,197	1,850	1,542	142	1,506	1,215	236	139	5,277	9,570	8,666	78.4	71.0	747	1,896	2,511	−330	586
Georgia	3 mos.	2,702	74	2,776	3,302	376	412	27	422	402	96	116	1,152	2,214	2,205	79.8	66.8	157	405	950	–	–
	6 mos.	5,426	173	5,597	6,454	774	804	56	828	760	193	229	2,162	4,277	4,296	76.4	66.6	312	1,009	1,839	–	–
Grand Trunk	3 mos.	24,057	805	24,862	23,259	2,814	3,741	231	3,796	3,598	140	514	11,224	20,105	20,563	80.9	88.4	2,155	2,602	621	−1,089	−4,031
Western	6 mos.	44,688	1,708	46,396	44,198	5,613	6,086	486	6.887	6.972	282	1,007	22,019	38,891	38,890	83.8	88.0	4,225	3,281	1,198	−4,646	−8,666
Green Bay &	3 mos.	820	81	901	2,029	344	258	23	304	265	53	142	696	40	1,472	86.25	72.25	74	88	223	−167	−167
Western	6 mos.	3,646	157	3,803	3,984	542	445	46	599	514	106	280	1,422	3,149	2,854	82.80	71.63	299	355	547	−70	332
Gulf, Mobile &	3 mos.	26,808	788	27,597	26,811	4,117	3,826	324	5,578	5,780	1,478	1,052	994	21,208	20,709	76.9	77.2	2,408	3,900	3,978	1,796	1,797
Ohio	6 mos.	53,134	1,691	54,826	54,471	8,311	7,219	650	10,914	11,269	2,914	2,100	1,937	41,986	40,760	76.6	76.2	4,799	8,060	8,277	3,573	3,546
Illinois Central	3 mos.	90,416	3,218	96,834	90,942	15,123	13,002	1,847	17,143	14,812	3,798	2,511	35,457	75,762	67,828	78.2	74.6	8,690	12,382	12,848	6,374	11,718
	6 mos.	178,205	12,161	190,366	180,295	29,780	25,360	3,693	33,606	30,836	7,599	4,965	68,415	148,080	137,326	77.8	76.2	17,489	24,796	24,110	14,433	19,773
Illinois Terminal	3 mos.	2,782	412	3,193	3,180	454	361	28	452	392	96	102	1,178	2,450	2,149	76.7	67.6	240	503	803	178	527
	6 mos.	5,412	763	6,175	6,399	814	686	45	908	840	171	198	2,308	4,739	4,377	76.8	68.4	427	1,009	1,572	473	948
Kansas City	3 mos.	25,778	1,044	26,822	26,406	4,011	3,237	361	4,107	4,186	1,230	940	8,736	19,094	18,454	71.2	69.9	2,182	5,547	5,616	2,296	2,309
Southern	6 mos.	49,950	2,483	52,433	51,478	7,156	5,797	620	8,076	8,082	2,421	1,865	17,240	36,891	35,444	70.4	68.9	4,683	10,860	11,204	4,124	4,755
Lake Superior &	3 mos.	968	407	1,375	1,945	275	299	62	409	320	182	8	551	1,371	1,248	99.7	64.1	158	−154	583	−37	683
Ishpeming	6 mos.	1,052	642	1,694	2,250	534	553	124	812	702	363	16	830	2,429	2,382	143.3	105.9	323	−1,057	−422	−811	−164
Lehigh Valley	3 mos.	12,997	359	13,355	12,158	2,598	1,593	660	2,806	2,338	377	409	5,941	12,752	10,649	95.5	87.6	1,096	−492	487	−3,097	−1,413
	6 mos.	23,213	708	23,921	23,815	4,123	3,170	940	5,301	4,617	759	811	11,007	23,235	21,312	97.1	89.5	2,117	−1,431	444	−6,403	−3,723
Long Island	3 mos.	2,512	24,213	26,725	24,548	4,883	4,721	282	8,528	7,092	1,444	148	18,329	36,411	32,161	136.2	131.0	1,832	−11,518	−9,274	−13,636	−11,192
	6 mos.	4,669	46,452	51,121	47,579	9,786	8,802	563	16,288	14,644	2,396	282	36,553	72,022	62,843	140.9	132.1	3,649	−24,550	−18,873	−28,754	–
Louisville &	3 mos.	112,191	2,492	114,685	114,592	14,769	20,199	1,481	22,267	21,982	7,883	2,469	42,733	88,263	90,877	77.0	79.3	8,202	18,220	16,908	7,492	−15,881
Nashville	6 mos.	220,458	5,341	225,799	219,581	30,560	34,637	2,870	45,128	43,804	15,788	4,854	80,230	176,574	175,706	78.2	80.0	15,817	33,408	29,783	12,433	−11,938
Maine Central	3 mos.	6,908	129	7,037	7,505	1,564	1,290	90	1,553	1,552	287	139	2,584	6,305	5,832	89.6	77.7	537	195	1,166	−194	722
	6 mos.	13,862	250	14,112	14,755	3,196	2,794	180	3,147	3,074	570	269	5,141	12,650	12,040	89.6	81.6	1,066	396	1,699	11	1,028
Missouri Illinois	3 mos.	2,013	25	2,038	2,024	276	319	11	745	642	341	56	452	*1,609	1,496	78.9	73.9	579	−150	−84	678	719
	6 mos.	3,895	30	3,925	3,845	487	502	22	1,496	1,294	683	107	836	3,090	2,845	78.7	74.0	1,151	−316	−172	1,349	1,428
M-K-T Lines	3 mos.	19,921	642	20,563	18,927	3,324	3,381	328	2,527	2,319	337	939	7,669	15,411	13,983	74.9	73.9	1,462	3,690	3,603	−364	−357
	6 mos.	38,510	1,367	39,877	36,656	5,774	5,917	650	5,217	4,472	680	1,865	15,250	30,029	26,946	75.3	73.5	2,940	6,907	7,003	−1,222	−355
Missouri Pacific	3 mos.	111,594	3,646	115,240	105,471	20,722	16,181	1,802	20,382	17,284	4,167	2,538	40,618	89,208	78,182	77.4	74.1	6,955	19,077	20,190	3,033	3,614
	6 mos.	213,504	7,993	221,497	205,231	35,970	29,459	3,183	38,949	35,031	8,249	5,094	78,749	168,410	151,405	76.0	73.8	14,693	38,394	39,575	7,583	7,115
Monongahela	3 mos.	2,200	14	2,214	1,966	481	401	152	255	152	19	5	493	1,302	990	58.8	50.3	132	780	885	18	57
	6 mos.	5,275	26	5,201	3,637	964	692	297	418	281	39	5	961	2,515	1,915	48.4	52.6	226	2,460	1,530	959	−26

(Continued on page 41)

Circle 13 on coupon page 57 ▼

Last year's covered hopper?

Look again.

There's a new look to maximum cube.

Look at the end of the new Pullman-Standard covered hopper car and you'll see a new silhouette. There's a new arch to the roof line that combines new strength with a longer trough hatch. This means easier loading for maximum use of actual cube, or, more usable cube than other covered hopper car designs.

But more payload is just one benefit of a dramatic engineering transformation.

The longer length trough hatch opening is completely uninterrupted, except for the recessed hopper partition sheets. This means clean, continuous loading, to the very ends of the car.

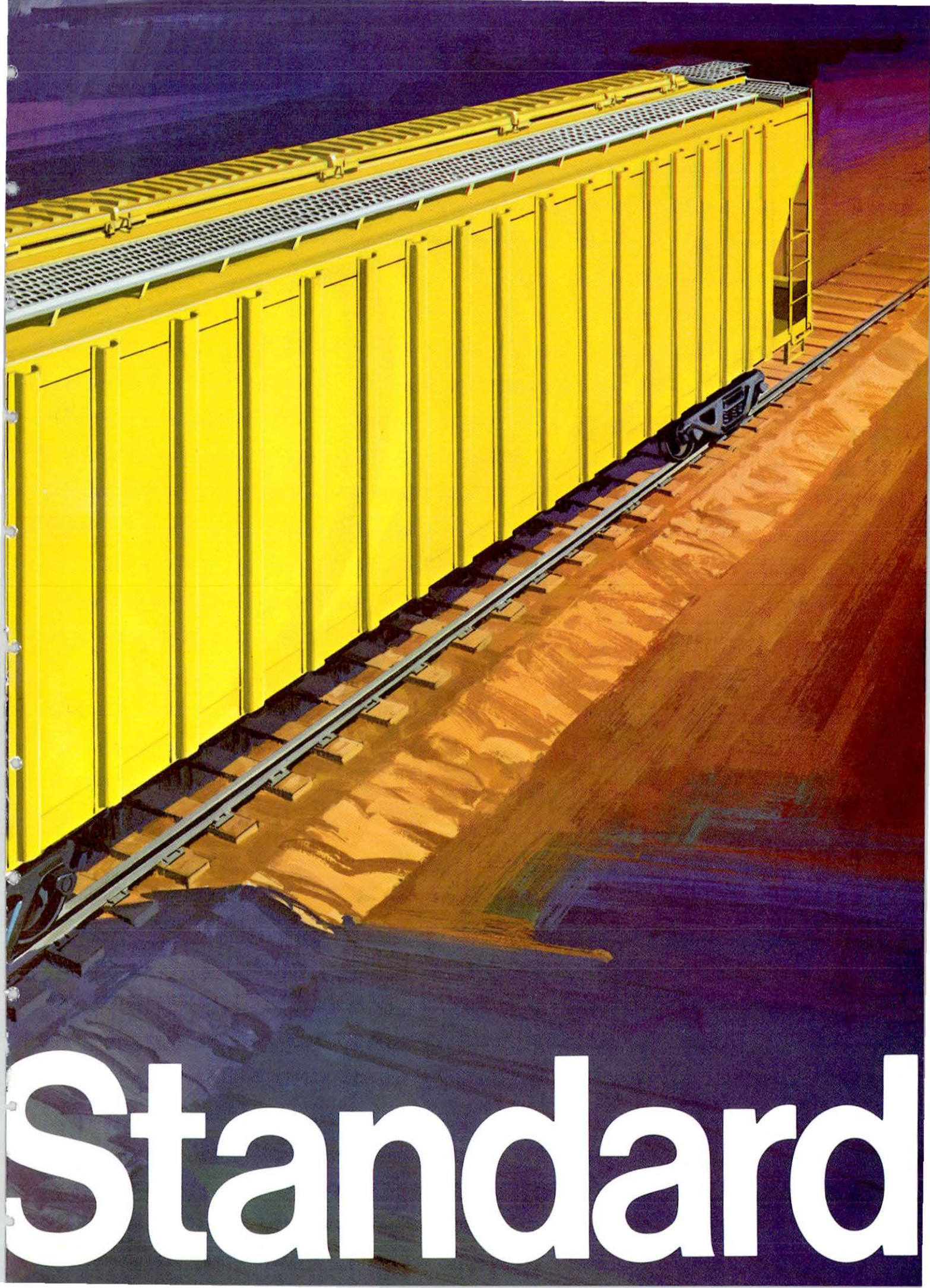
These shipping benefits are plussed by a host of additional improvements.

Nineteen more features include a choice of hatch opening widths, new hatch holddown locks, and new, more compressible extruded gaskets for better sealing. The new covered hoppers also provide *longer truck centers* and *lower centers of gravity* for better riding, as well as *lighter tare weight* and *more usable cube* for given car length in its plate configuration.

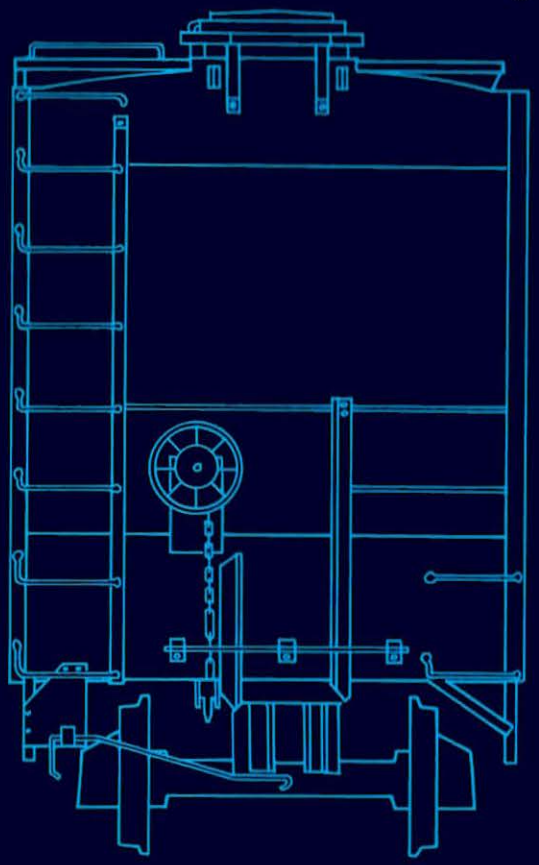
Pullman-Standard's new covered hopper cars come in a broad range of sizes, *with sizes through 5100 cubic foot capacity meeting Plate B clearances.* Available with or without center sill, and custom-built to best fit the requirements of both railroad and shipper.

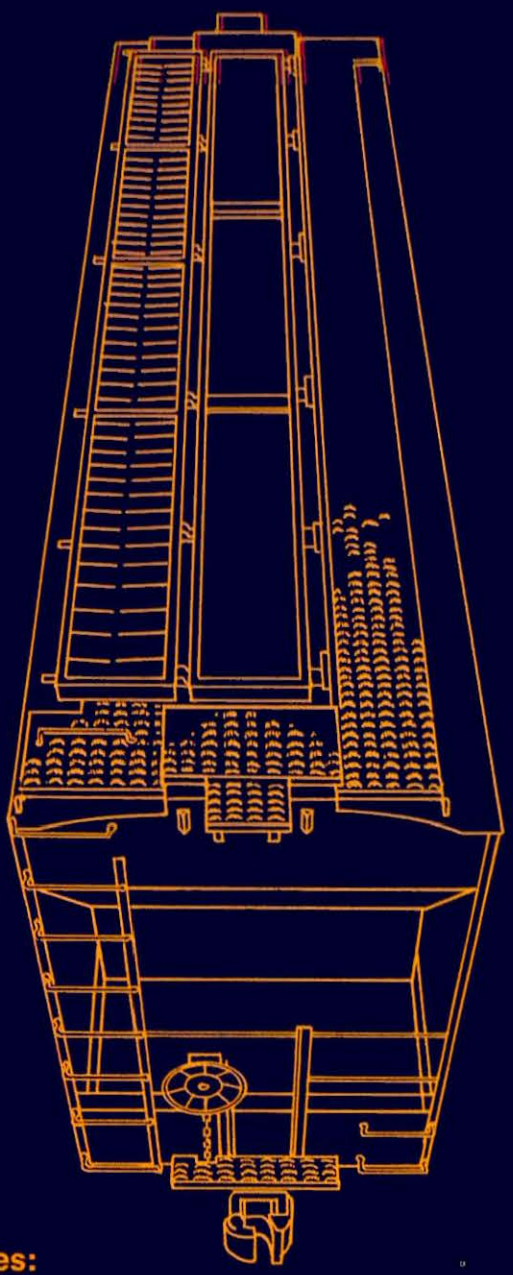
There's more than a new look to Pullman-Standard's covered hopper cars. There's a whole new performance capability, proven and backed by the world's largest builder of rail cars!

Pullman-S


Standard

Re-engineered to a new standard in covered hopper cars.





The new Pullman-Standard covered hopper cars:

- **WITH or WITHOUT CENTER SILL**
- **LONGER TRUCK CENTERS**
- **LOWER CENTERS OF GRAVITY**
- **LIGHTER TARE WEIGHT**
- **MORE USABLE CUBE**

PLUS 19 more new engineering features:

- new roof design maximizes angle of repose
- new roof strength
- no roof carlines
- full length continuous trough hatches
- reinforced hatch coaming ends
- 20 or 24-inch wide hatch openings
- choice of two interchangeable fiberglass hatch covers
- new weather-resistant holddown design
- new holddown gasket seals
- stronger hatch cover design
- new extruded rubber hatch seals
- improved holddown locking device
- wider, pressed steel running boards
- wider, roll-formed side posts
- new standard roll-formed side plates
- forged steel front draft lug arrangement
- improved brake pipe positioning on cars without center sill
- safety guards at ladder rung ends
- new smoother interior surfaces

For complete information pertaining to the new line of Pullman-Standard covered hopper cars, call 312/939-4262. Or write Marketing Department, Pullman-Standard, a division of Pullman Incorporated, 200 South Michigan Avenue, Chicago, Illinois 60604.

Pullman-Standard

The new standard in covered hopper cars

Second Quarter Figures of Calendar Year 1972

(Dollar figures are stated in thousands: i.e., with last three digits omitted)

Name of Road		Operating Revenues				Operating Expenses													Railway tax accruals	Railway operating income		Net income	
						Maint. of Roadway and Structures			Maint. of Equipment							Operating ratio							
		Freight	Other	Total 1972	Total 1971	Total 1972	Total 1971	Deprec. and Retirements	Total 1972	Total 1971	Deprec. and Retirements	Traffic	Transportation	Total 1972	Total 1971	1972	1971		1972	1971	1972	1971
Norfolk & Western	3 mos.	196,324	8,297	204,621	204,361	24,410	23,215	2,708	35,645	34,522	13,302	4,168	65,756	144,586	139,968	70.7	68.4	19,128	40,908	41,557	−33,090	9,832
	6 mos.	386,505	14,707	401,212	399,052	42,288	43,262	5,475	71,346	69,327	26,543	8,335	137,469	280,067	275,406	69.8	69.0	38,289	82,855	80,844	−9,201	30,932
Norfolk Southern	3 mos.	3,883	58	3,941	3,827	783	792	79	618	559	179	166	1,364	3,243	3,003	82.3	80.2	275	422	552	−41	254
	6 mos.	7,663	125	7,788	7,342	1,587	1,414	158	1,217	1,123	359	335	2,754	6,517	5,737	83.7	79.3	559	711	1,062	−34	386
Northwestern Pacific	3 mos.	3,525	9	3,534	3,245	912	701	67	81	62	2	26	1,106	2,207	1,818	62.5	56.0	234	1,092	1,226	800	885
	6 mos.	7,122	17	7,139	5,749	1,800	1,582	109	135	163	4	50	1,952	4,248	3,927	59.5	68.3	732	2,159	1,393	1,421	683
Oregon Electric	3 mos.	1,621	125	1,745	1,751	238	251	16	77	84	—	7	740	1,104	831	63.3	47.5	203	438	634	54	240
	6 mos.	3,280	213	3,493	3,197	444	501	37	89	170	—	15	1,428	2,058	1,755	58.9	54.9	492	943	1,039	320	232
Penn Central	3 mos.	415,435	55,019	470,454	485,019	68,302	66,491	8,037	85,217	94,367	13,907	5,273	212,129	393,684	406,095	83.7	83.7	33,870	42,899	43,792	−59,652	−35,421
	6 mos.	798,620	106,266	904,886	928,505	124,216	127,517	15,749	172,234	192,793	27,965	10,432	414,362	771,909	818,918	85.3	88.2	71,501	61,475	35,581	−124,828	−127,963
Penn Reading Seashore Lines	3 mos.	1,979	250	2,230	2,240	530	616	64	343	257	31	19	1,617	2,645	2,450	118.6	109.4	178	−593	−384	−1,226	−1,012
	6 mos.	3,807	486	4,293	4,287	1,070	1,121	125	653	566	64	34	3,218	5,235	4,870	121.9	113.6	361	−1,302	−930	−2,607	−2,203
Pittsburgh & Lake Erie	3 mos.	9,424	547	9,972	11,674	1,487	1,566	33	4,317	3,569	1,603	184	3,987	10,685	9,792	107.2	83.9	887	−1,600	−1,787	2,174	3,902
	6 mos.	17,086	1,111	18,197	20,872	2,757	2,889	199	8,501	7,710	3,261	358	7,516	20,563	19,922	113.0	95.4	1,698	−4,065	−4,328	3,831	7,218
Reading	3 mos.	23,252	5,004	28,256	31,842	4,557	4,319	684	5,662	5,019	1,240	720	13,169	26,195	24,984	92.7	78.5	2,674	−613	4,134	−6,164	1,333
	6 mos.	44,132	10,008	54,140	60,214	9,086	8,570	1,135	11,302	10,544	2,491	1,436	26,232	52,091	50,184	96.2	83.3	5,349	−3,299	4,606	−13,077	−1,054
Richmond, Fredericksburg & Potomac	3 mos.	6,266	355	6,621	6,637	810	735	119	792	769	226	107	1,497	3,602	3,656	54.4	55.1	1,432	1,586	1,455	2,037	1,543
	6 mos.	12,079	691	12,770	13,462	1,555	1,505	238	1,590	1,644	497	213	2,920	7,041	8,132	55.1	60.4	2,946	2,783	2,488	3,566	2,874
St. Louis-San Francisco	3 mos.	56,471	2,075	58,546	54,266	8,800	7,192	734	8,975	1,722	2,469	1,844	1,733	44,649	39,953	76.3	73.6	4,513	9,385	9,610	5,214	4,662
	6 mos.	110,403	4,000	114,404	106,145	17,505	14,712	1,672	17,996	16,279	4,900	3,648	3,347	87,524	78,364	76.5	73.8	9,013	17,866	18,769	8,268	7,680
St. Louis Southwestern	3 mos.	39,719	454	40,173	38,844	5,056	4,082	289	9,062	6,224	3,126	921	13,206	29,166	23,575	72.60	60.7	3,664	7,343	7,397	8,840	8,412
	6 mos.	77,161	982	78,143	73,606	9,313	7,188	577	17,477	12,168	6,221	1,770	25,948	56,345	44,722	72.11	60.8	7,862	13,935	15,557	17,706	19,312
Seaboard Coast Line	3 mos.	141,001	3,467	144,468	134,438	21,106	19,150	1,533	25,300	24,093	6,499	3,136	50,480	105,694	98,504	73.2	73.3	12,482	26,292	24,152	14,968	13,555
	6 mos.	276,004	7,511	283,515	274,031	41,522	38,039	3,071	49,026	49,003	12,866	6,212	95,291	206,283	202,206	72.8	73.8	24,465	52,768	47,976	28,343	2,543
Soo Line	3 mos.	33,577	987	34,564	30,225	5,920	5,163	346	4,670	4,303	1,008	919	12,500	25,515	22,390	73.8	74.1	3,352	5,697	4,797	2,410	2,039
	6 mos.	65,559	1,671	67,229	59,060	10,273	9,247	704	9,006	8,293	1,995	1,797	24,569	48,553	43,275	72.2	73.3	6,736	11,940	9,782	5,450	4,077
Southern Railway	3 mos.	119,500	3,879	123,379	112,465	20,479	16,295	1,554	20,313	19,450	7,003	2,430	36,152	85,038	77,000	68.9	68.5	12,553	25,788	22,258	17,388	14,177
	6 mos.	232,229	7,517	239,746	220,749	38,929	31,631	2,960	42,112	37,789	13,989	4,673	70,304	167,194	151,273	69.7	68.5	23,501	49,051	43,715	33,457	27,400
Alabama Great Southern	3 mos.	12,355	454	12,809	12,420	1,693	2,060	230	2,325	2,176	909	245	3,338	8,142	8,127	63.6	65.4	1,249	3,418	2,797	2,698	2,013
	6 mos.	24,421	875	25,296	25,255	4,207	4,408	463	4,517	4,164	1,778	497	6,553	16,949	16,270	67.0	67.1	2,074	6,274	5,402	4,575	3,672
Cinn. New Orleans & Texas Pacific	3 mos.	19,447	18,426	20,030	19,087	2,919	2,820	226	3,751	3,677	1,607	378	5,060	12,858	12,084	64.2	63.3	2,508	4,663	4,369	3,113	2,831
	6 mos.	37,313	33,313	38,534	34,869	4,457	4,393	429	7,418	6,930	3,191	727	9,669	23,766	21,744	61.7	62.4	5,139	9,630	8,308	6,466	5,321
Georgia Southern, & Florida	3 mos.	5,602	117	5,720	5,184	643	959	39	628	485	231	105	1,426	3,011	3,001	52.6	57.9	454	2,254	1,925	940	697
	6 mos.	10,988	305	11,294	10,385	1,245	2,450	76	1,204	967	415	215	2,764	5,869	6,561	52.0	63.2	926	4,498	3,306	1,907	916
Southern Pacific	3 mos.	286,924	6,019	292,943	266,738	38,105	34,251	3,036	53,763	49,616	15,483	4,323	107,214	219,315	201,717	74.9	73.8	24,218	49,410	43,578	30,596	31,505
	6 mos.	543,666	12,110	555,776	504,913	75,291	66,811	5,870	106,625	101,710	30,532	8,572	205,624	427,747	399,307	77.0	76.9	46,784	81,245	70,386	46,400	45,629
Texas Pacific	3 mos.	26,545	949	27,494	26,225	4,309	3,762	369	5,235	4,391	1,517	1,028	10,390	22,086	20,214	80.3	77.1	1,779	3,629	4,180	2,061	1,984
	6 mos.	51,784	2,082	53,866	52,092	8,347	7,156	706	10,228	9,181	2,983	2,017	20,384	43,154	40,086	80.1	76.9	3,514	7,198	8,355	3,674	4,288
Toledo, Peoria & Western	3 mos.	2,858	114	2,972	2,754	428	499	13	287	247	67	228	1,031	2,196	2,115	73.9	76.8	295	481	370	218	171
	6 mos.	5,558	247	5,805	5,472	741	860	29	558	521	134	454	2,046	4,247	4,065	73.1	74.3	580	978	866	403	402
Union Pacific	3 mos.	185,871	6,029	191,900	182,371	24,467	21,895	2,089	36,602	35,070	13,726	4,684	64,949	140,424	132,356	73.2	72.6	17,834	33,642	30,898	26,649	25,811
	6 mos.	358,798	12,216	371,014	354,559	47,180	42,200	4,170	72,599	69,942	27,175	9,173	127,598	276,094	266,351	74.4	75.1	34,204	60,716	50,829	50,671	51,579
Western Maryland	3 mos.	11,262	741	12,003	14,594	1,931	2,142	288	2,783	3,174	903	451	497	10,745	11,750	89.5	80.5	956	303	1,712	−516	469
	6 mos.	22,646	1,602	24,248	28,550	3,974	4,203	486	5,613	6,523	1,813	921	984	21,756	23,657	89.7	82.9	1,512	980	2,657	−528	801
Western Pacific	3 mos.	20,063	860	20,924	20,478	3,272	2,993	312	3,649	3,574	897	911	7,992	17,494	16,274	83.6	79.5	1,512	1,918	2,683	664	1,470
	6 mos.	40,034	1,860	41,894	38,713	6,265	5,895	616	7,304	7,067	1,809	1,751	15,920	34,594	31,942	82.6	82.5	3,132	4,167	3,639	1,820	615

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AN EVANS PRODUCTS COMPANY

Circle 14 on coupon page 57

Marketing—as shippers see it

(Continued from page 32)

"So far it seems railroads are going about it rather haphazardly. If they intend to really emphasize marketing, I believe a more concentrated and specific effort is necessary."

J.A. Illes, director of transportation, Outboard Marine Corp., Waukegan, Ill.: "Railroad views are biased and computer oriented. They must recognize maximum costs permissible on products—consider and recognize shippers' needs."

R.A. LaVigne, traffic manager, Hiram Walker & Sons Ltd., Walkerville, Ont.: "Railroads have failed to analyze our specific problems and suggest improvements."

Dana Throckmorton, traffic manager, Federal Warehouse Co., Peoria, Ill.: "Too often those charged with helping shippers with their marketing problems don't know enough about their company's capabilities to follow through to get the job done." Throckmorton is particularly concerned about the ability of the carrier to supply "the right kind of equipment at the right time at the right place."

J. Robert Morton, vice president corporate transportation and distribution, Combustion Engineering, Stamford, Conn.: "There's too much emphasis on operating ratios and too much emphasis on operating expenses. A balance of communications between marketing and sales is essential. . .The trouble with the rail carriers is that they still do things as they did 50 years ago. It is the shipper and receiver who is asking. Then after you sit down and discuss a specific marketing problem you wait and you wait; they set dates for answers; the dates go by without answers; you call back; they say they will call you back; more weeks pass. And you still wait. . .What happens after you wait so long and you call so much is this: You decide to seek other modes of carriage."

Erwin Rosenzweig, traffic manager, Longview Fibre Co., Longview, Wash.: "Marketing, sales, pricing are interrelated, but not always coordinated—so the shipper is often confused."

● **Where marketing breaks down.** Does marketing get sufficient support from the top echelons of railroad management?

"No," says Cleo Wrap's Karel. "Railroad marketing men may in some instances have support from their top management—however management has been leaning toward the operating problems from a profit standpoint and has let the marketing area suffer. I firmly believe that the marketing representative visiting my office does not have the confidence he should have in asking support of his management for something we may suggest as a method of increasing the business to his road."

Steelcase's Catalano agrees: "There are some very bright young men in the railroad pricing departments but their ideas are not being accepted too readily—and while all this takes place the shippers are turning to private carriage, contract trucking or in some cases regular common carrier motor service."

Zumwalt, of Wilson Certified Foods, feels that "most railroad management gives more support to the operating and sales department. Where marketing is separated from the sales organization, the marketing department is small by comparison."

"Railroads are going about it haphazardly. A more concentrated effort is necessary."

E.M. Burk, Wyatt Division

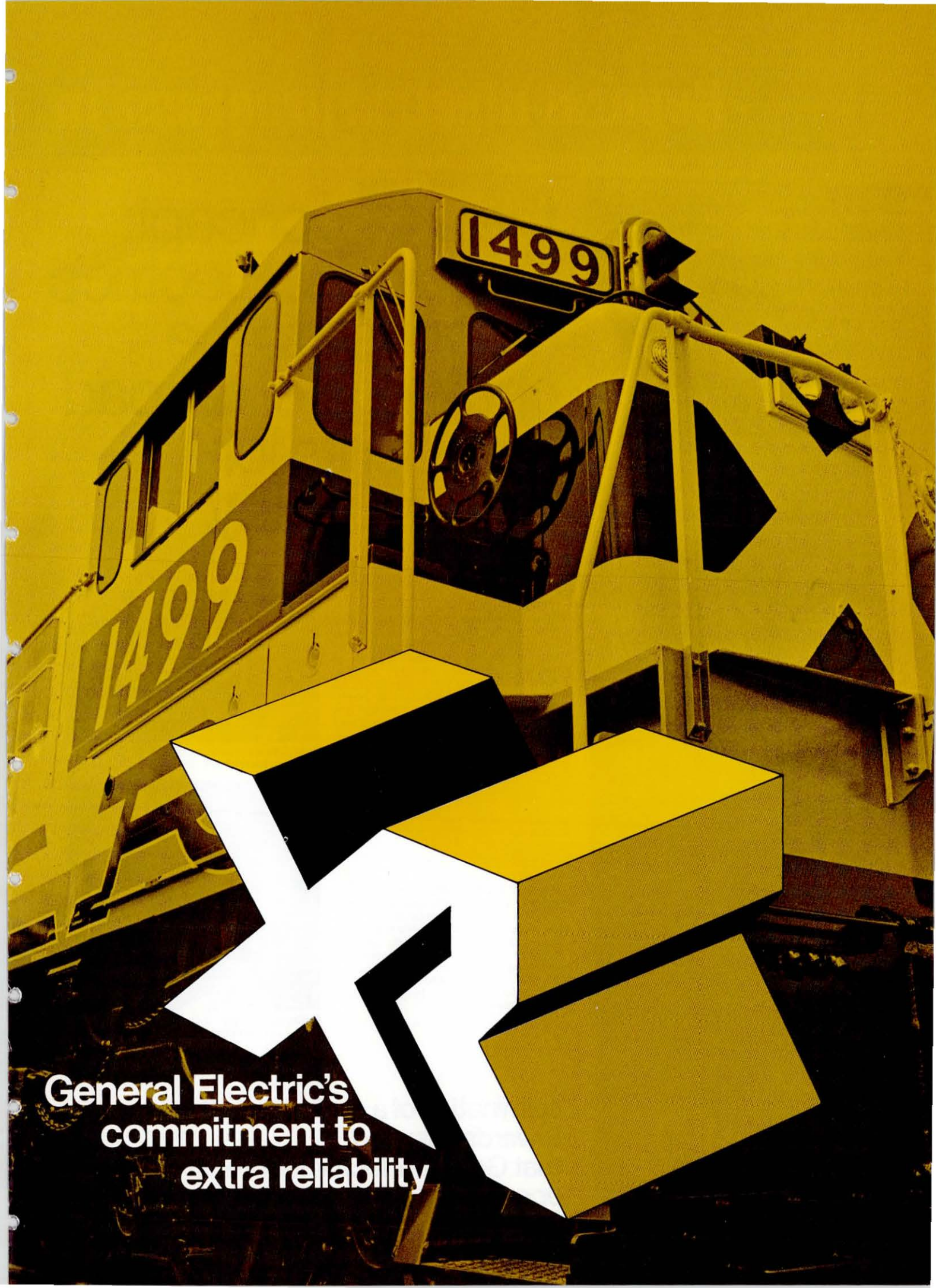
Lamb-Weston's Osbjornson believes that "in some organizations the basic problem is below the top level."

Pillsbury's Alexander feels that while the need for marketing has adequate support at the top, "implementation of effective marketing organization needs more support"—a point also made by several other shippers.

The general view of shippers is that it's difficult to place the blame for any marketing breakdown on an industry-wide basis because situations differ from carrier to carrier. "Some have it; most don't," is the general feeling.

But, says Pacific Lumber's Parker: "There is a problem somewhere. Either management is not paying enough attention to suggestions from marketing, or the marketing department proposals themselves are based on faulty reasoning." ■

Circle 15 on coupon page 57 ▶



General Electric's commitment to extra reliability

General Electric progress in

"It's a programmed effort to innovate and upgrade every phase of the GE locomotive business."

"General Electric's new XR concept is a direct response by 7,000 dedicated General Electric employees to the challenge for ***Extra Reliability*** made by railroad presidents.

In bringing together all the elements of extra reliability, General Electric has concentrated ***Every Phase*** of its locomotive business on innovation and systems upgrading.

General Electric's efforts to increase locomotive reliability have increased ***Motive Power Efficiency,*** will help to improve railroad profitability, and will make contributions to meeting social and ecological challenges facing the industry."

Olaf F. Vea
General Manager
Locomotive Products Department

the XR concept: "It's General Electric's response to the challenge of railroad presidents for extra reliability."

NEW SUPPORT RESOURCES. New investments in support facilities totaling nearly $14 million have been instrumental in the development of the XR locomotive concept. A complete new engine remanufacturing facility, and a new 150,000 sq. ft. Transportation Technology Center are dedicated to developing railway power and reliability for the future.

New Transportation Technology Center . . . meeting tomorrow's reliability challenges.

MANUFACTURING. Generator frames, and irregular-shaped pieces of sheet steel are manufactured with the aid of accurate numerical control. New automated processes, including the first numerically-controlled punching and nibbling machine of its type in the United States, mean controlled attention to locomotive quality and reliability.

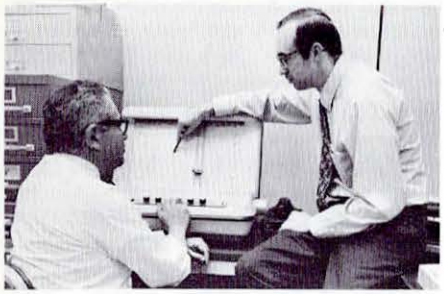
Automation and locomotive manufacturing . . . controlling tolerances to reliability standards.

XR

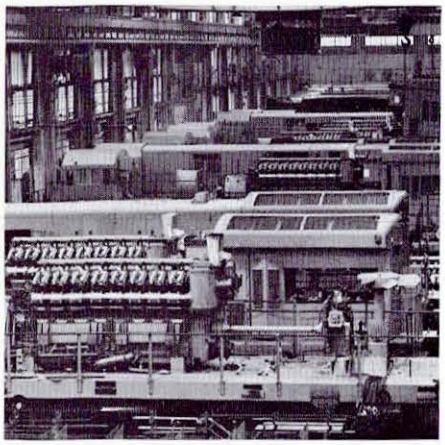
culmination of a dedicated effort towards assuring that General Electric locomotives operate with extra reliability throughout an extended life cycle.

transportation systems

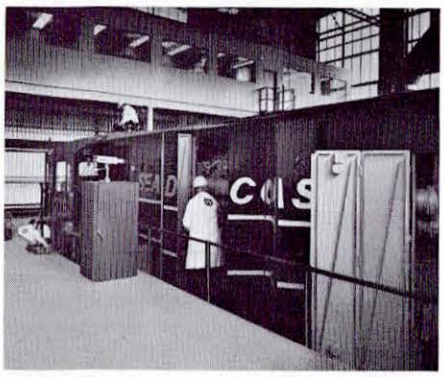
General Electric transportation systems



ENGINEERING teams use computers to construct mathematical models to simulate locomotive operating conditions. They anticipate operational demands and environmental hazards. The result: extra reliability is designed into GE's XR.



QUALITY WORKMANSHIP is a thing of the present at GE's Locomotive Products Department. More than 7,000 employees are dedicated to making the XR the most reliable locomotive ever manufactured.



TESTING FACILITY improvements include: closed circuit television and computers, a new tape-controlled electrical testing system designed specifically for locomotives, and sound-proofed control room.

Responding with new ideas in components and system design...

PERFECTION IN ENGINE PARTS. Improved cylinder assembly procedures virtually eliminate head-to-liner leaks. A steel crown doubles piston life and strength. Tufftriding provides extended liner and ring service. New connecting rod bearing increases load carrying capacity. The turbocharger features higher strength rotors and an improved seal.

PROTECTION AGAINST UNNECESSARY SHUTDOWN. Computerized balance of all interrelated protective systems — low oil pressure devices, low water protection, equipment blower protection. Major advances in filtration — new suction lube oil strainer, water system screens and GE paper filters. New relief valve position, dual water drains, improved water fill cap and lube oil sampling valve.

SIMPLIFIED MODULAR CONSTRUCTION. Fluid amplifier water temperature control system. Packaged CMR wheel slip system for 20% higher adhesion. On-board load testing for rapid, low-cost checkout of system. New uniform-force dynamic braking system with grid temperature regulation. New alternator-rectifier panel with 50% improvement in cable and diode cooling.

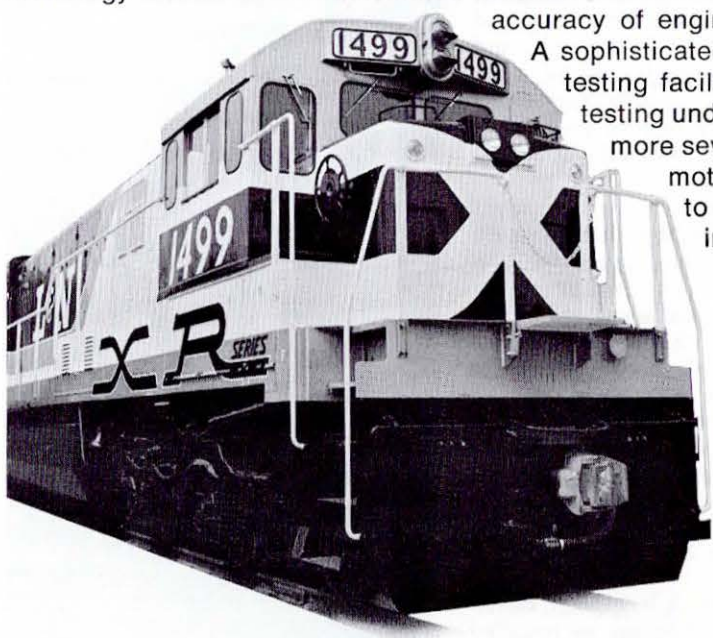
EXTRA INTEGRITY OF CONSTRUCTION. An improved electrical system which now features Flamenol XL control wiring, copper-aluminum termination, cleated cables, tape rails, and ring-type terminals. An equally-upgraded mechanical system with huck fasteners on the gear case, Timken AP journal bearings, Nylatron pedestal liners, new draft gear, and spot facing of nut seats.

EXTRA SAFETY. AAR 3-handle controller. Break-in-two protection advances.

REDUCTION OF EMISSIONS. New governor dual speed bushing. Perfected speed control. Anti-bog devices. Injection and combustion advances.

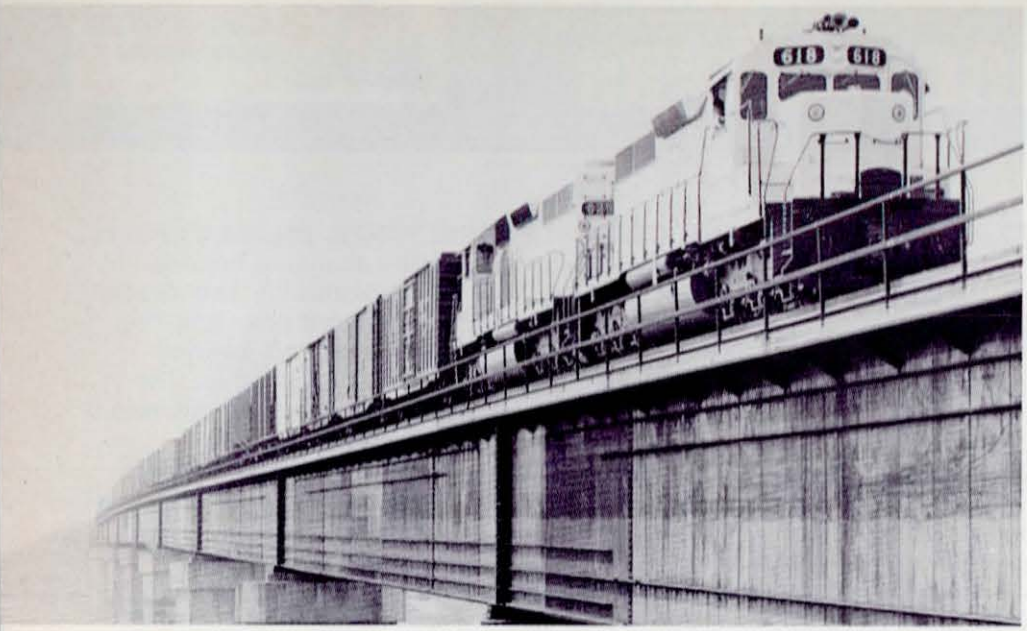
TESTING. A rigorous and repetitive quality assurance program which includes testing of motors, controls, and other critical equipment as many as three and four times prior to assembly on the locomotive. A new Metrology Center whose automated machines assure 100% dimensional accuracy of engine components. A sophisticated locomotive testing facility. And track testing under conditions far more severe than the locomotive is likely to encounter in actual service.

117-76



General Electric Company
Transportation Systems Business Division
Erie, Pennsylvania 16501

GENERAL ELECTRIC



PAIR OF SD40-2 UNITS with another pair under radio control back in train crosses Arkansas River on world's longest continuous welded box girder bridge.

KCS continues to expand its Locotrol operations

By the end of 1972, Kansas City Southern will have 11 sets of remote locomotive control equipment installed in its motive power units. The RCE-1, or Locotrol, equipment on KCS is credited with substantial improvements in its freight operations.

Actually, while the road is an old hand at Locotrol operation, it quickly concedes that there are still things to learn about this system for linking lead and remote locomotives with radio and digital logic to provide precise automatic control of throttle and brake from the hand of a train to a second or third locomotive located optimally within a train consist.

Rome J. Blair, KCS vice president and general manager, says that his road's utilization of Locotrol since 1966 has produced significant economies in operation and maintenance. Locotrol is manufactured by the Harris Controls division of Harris-Intertype Corp. As KCS traverses the hilly terrain of the Oklahoma/Arkansas border country between Pittsburg, Kan., and Shreveport, La., it must surmount four miles of 1.8% grade at one location and seven miles at another. At Rich Mountain, further south, the line climbs 20 miles of 1.5% grade.

● **Where it counts.** A.V. Ingram, traveling engineer, says: "Before we installed Locotrol, we could not move an 8,000-ton train over Rich Mountain grade with five 2,250-hp GP30s at the head end. With Locotrol, two 3,000-hp SD40s at the front and two more as a rear consist routinely move 10,000-ton trains."

LOCOTROL PANEL installed atop controller is checked by A.V. Ingram, traveling engineer.

Blair says he is still experimenting with rear consist locations for top effectiveness. "With all the power at the head end," he explains, "we've found drawbar and knuckle failures show up most between the fifth and tenth cars. We're slashing these failures 50% with synchronous power to the rear. But we've found the location of rear consists must be varied for better efficiency, depending on factors like loading, train length and weather." For a single remote consist, KCS puts it about two-thirds of the way back in the train.

Even though KCS was a pioneer in the use of train radio, as well as of Locotrol, the synchronous response in microseconds of the automatic control for two or three locomotive consists overcomes time delays associated with voice communication and human response.

Southern Railway was the first major user of Locotrol. In 1966, Blair requested that Ingram and T.P. Martin, KCS's other traveling engineer, study the concept. After recommending its application, they held classes on the operation and handling of the equipment before the first set was put in service late in 1966.

● **Many advantages.** KCS makes a case for the advantages of Locotrol. There is a marked reduction in slack action with a consequent decrease in lading damage. At terminals trains are charged much more rapidly since air is introduced to the brake pipe at more than one location. Weather conditions no longer dictate the lengths of trains.

With split power, wheel slippage is reduced and KCS finds that there is a marked improvement in train starting. Since brake response is improved, overall train speeds can be increased. There is also a reduction in sticking brakes since release is faster and more positive. The splitting of power reduces the potential for derailing long cars and reduces wheel and flange wear. In effect, the characteristics of handling short trains are imparted to the very longest. Says Ingram, "We can make a panic stop with Locotrol more smoothly than a routine service application without it."

KCS has long had one of the most favorable of operating ratios in the industry. The Locotrol installations are only one example of the way the road works to keep its ratio that way. Microwave extends the length of the line and is now used for operation of the CTC system for the 214 miles between De-Queen and Gentry, Ark. By the end of 1973, CTC will extend the entire 550 miles between Kansas City and Shreveport. KCS has 33 hot box and dragging-equipment detectors in service. ■

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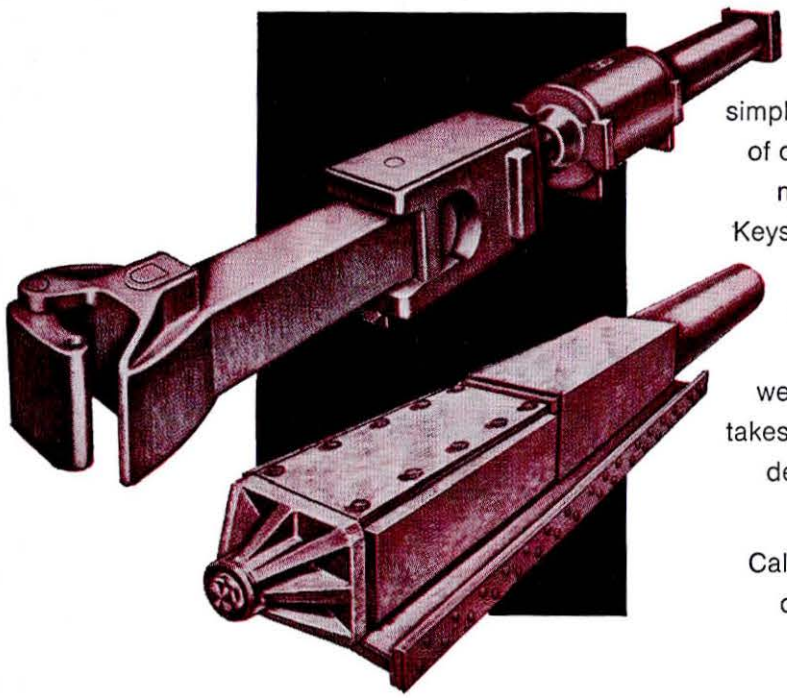

Keystone SHOCK CONTROL'S service record is superior. Our simple design reduces the possibility of component failure to an absolute minimum. But we still torture-test Keystone SHOCK CONTROL units to leave no doubt that the rugged, sturdier units, with larger shafts, heavy rod heads, and massive wear-plated yokes have got what it takes to provide the long, trouble-free dependable service railroads want and need year after year.

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Circle 16 on coupon page 57

People in the News

D.A. Flammia, Jr.
NS

James W. Germany
SP

Robert C. Marquis
WP

James E. Bartley
NITL

AMTRAK.—**James M. Cowell, Jr.,** procurement director, Electric Boat Division, **General Dynamics Corp.,** named vice president-procurement and material control.

ANN ARBOR.—**Harry E. Carlson** appointed eastern district sales manager, Owosso, Mich.

ARKANSAS & LOUISIANA MISSOURI.—**E.L. Roberson** promoted to manager-pricing and divisions, Monroe, La.

BESSEMER & LAKE ERIE.—**E.G. Morse,** trainmaster, Butler, Pa., transferred to Greenville, Pa.

BURLINGTON NORTHERN.—In the marketing department's market development division, **Michael J. Barron,** assistant vice president, manufactured products, named assistant vice president, food and agricultural products. Mr. Barron's successor is **Robert W. Morrison,** manager, commodity marketing, energy, metallics and chemicals. **Theodore F. Freers,** project manager, bulk materials, manufactured products, becomes director of planning, manufactured products. **Wilfred C. Hageman,** assistant vice president, forest products, named assistant vice president and regional sales manager, western region, San Francisco, to succeed **F.G. Butcher,** retired. **Frank G. Lingenbrink,** assistant to vice president, marketing, St. Paul, succeeds Mr. Hageman, and in turn is succeeded by **Vance A. Opsahl,** area director, sales and service, Seattle.

William A. Thompson, Jr., assistant superintendent, Aurora, Ill. named assistant to regional vice president, Chicago, succeeding **Earl J. Currie,** appointed terminal superintendent, Minneapolis.

CANADIAN NATIONAL.—**Ronald M. Bailey,** regional chief engineer, Prairie Region, Winnipeg, transferred to the Mountain Region, Edmonton, Alta.

Michael E. Matthews, public relations officer, Edmonton, Alta., appointed assistant manager, public relations, Great Lakes Region, Toronto, succeeding **Wesley T. Kelley,** resigned.

Jean-Marie Premont appointed superintendent of police, Atlantic Region.

CANADIAN PACIFIC.—**J.H. Geddis** appointed assistant chief of transportation, Montreal. He will be responsible for designing, staffing, implementing and operating the System Motive Power Control Centre.

DEPARTMENT OF DEFENSE.—**Vincent F. Caputo,** director of transportation in the office of the DOD assistant secretary for logistics, retired Oct. 27 after 43 years of government service.

DEPARTMENT OF TRANSPORTATION.—**Donald W. Bennett** appointed chief counsel of DOT's Federal Railroad Administration. In private practice in Cleveland, Ohio, since 1960, Mr. Bennett has represented railroad labor organizations and various federal regulatory agencies and has participated in rulemaking proceedings and appeals relating to railroad safety matters.

ERIE LACKAWANNA.—**Thomas J. Madai** appointed assistant supervisor-dispatcher, piggyback operations, Chicago.

Richard H. Hahn, vice president, Cleveland, Ohio, appointed vice president-finance there.

FRISCO.—**W.S. Hinds,** manager general accounts, appointed assistant controller. **A.H. Swegart,** assistant to controller, named manager general accounts and taxes. **P.E. Hund,** manager insurance, named manager corporate insurance.

J.P. Knox, chief mechanical officer, named chief mechanical officer-equipment. **O.H. Summers,** assistant chief mechanical officer, becomes chief mechanical officer-motive power. **R.H. Stracke,** master mechanic, appointed superintendent locomotive shop, and **L.M. Buffington,** general foreman roundhouse, assistant superintendent locomotive shop. **J.R. Wilson,** general car foreman, named assistant superintendent car department. **B.G. Jones,** general car foreman, named general foreman-car shops.

LOUISVILLE & NASHVILLE.—**A.C. Parker, Jr.** named assistant chief engineer-methods and procedures, Louisville. He was formerly assistant chief engineer, **Seaboard Coast Line,** Jacksonville, Fla.

MILWAUKEE.—**Leonard R. Thelander,** assistant to the general manager of purchases and material, retired Sept. 29 after more than 49 years' service.

MISSOURI PACIFIC-TEXAS & PACIFIC.—**Bram L. Everitt** named sales manager, Toronto, Ont.

NORFOLK & WESTERN.—**Donald E. Middleton** elected secretary of the company, Roanoke, Va.

NORFOLK SOUTHERN.—**D.A. Flammia, Jr.,** senior vice president, Raleigh, N.C., elected president, succeeding **Henry Oetjen,** who retired Nov. 16, after 21 years of service with the NS.

PENN CENTRAL.—**James T. Sullivan,** engineer track, Philadelphia, appointed chief engineer, succeeding **Charles E. Defendorf,** retired. **Robert L. Teeter,** chief engineer, **Pittsburgh & Lake Erie,** succeeds Mr. Sullivan as engineer track, PC. **William J. Sponseller,** engineer-construction, advanced to assistant chief engineer-construction. **Jerome D. Cossel,** product engineer-track, Toledo, Ohio, named engineer maintenance of way, succeeding **Charles F. Parvin,** retired.

Joseph J. Baffa, division engineer, Chicago, transferred to the Cleveland Division at Cleveland, succeeding **Charles F. Hunt,** named manager-company vehicles, Philadelphia.

PITTSBURGH & LAKE ERIE.—**Thomas C. Netherton,** engineer maintenance of way, Pittsburgh, appointed chief engineer, succeeding **Robert L. Teeter,** named engineer track, **Penn Central,** Philadelphia.

SEABOARD COAST LINE—LOUISVILLE & NASHVILLE.—**J.J. Walsh** appointed area manager industrial development and **S.A. Harrison** named manager industrial development, both at Chicago.

SOUTHERN.—**J.T. Kimbrough,** regional materials manager, Charlotte, N.C., transferred to Knoxville, succeeding **C. Smith,** retired after more than 37 years of service. **Homer I. Jerrolds,** regional material manager, Birmingham, Ala., transferred to Charlotte. **Charles Bonasera** named regional materials manager, Birmingham.

SOUTHERN PACIFIC.—**James W. Germany,** general manager, system managerment services, named to the new position of vice president, management services. Mr. Germany also serves as president of **TOPS On-Line Services Inc.,** a **SP** subsidiary.

UNION PACIFIC.—**James P. Healy,** audit administrator, named to the newly created position of director-auditing, transportation division, with headquarters continuing in Omaha.

WESTERN PACIFIC.—**Robert C. Marquis,** chief transportation officer, elected vice president-operation.

Alexis P. Victors, market manager, named director-industrial development.

David C. Rightmire appointed sales manager, Chicago. He was formerly regional sales manager, Midwest Region, **REA Express.**

WESTERN RAILROAD ASSN.—**Norman S. Landgraff,** chairman, **Trans-Continental, Western & Southwestern Railroad Passenger Associations,** retired Oct. 31 after 45 years' service.

(Continued on page 66)

Circle 17 on coupon page 57 ▶

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mo-pac "haulsall"

Circle 18 on coupon page 57

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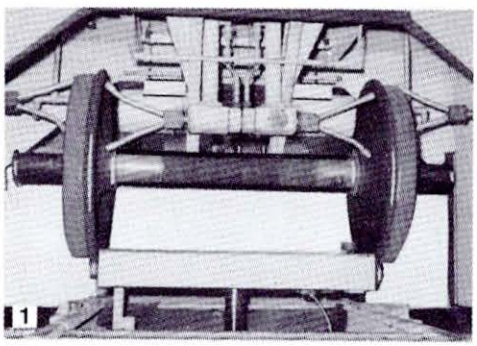
ECONOMICAL

ask for a copy of cost comparison



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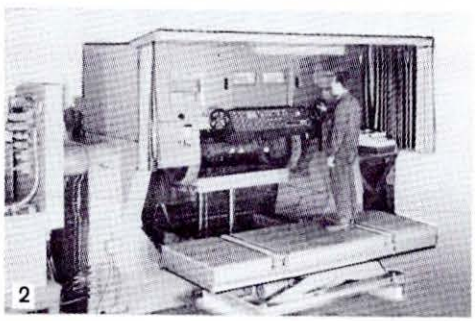

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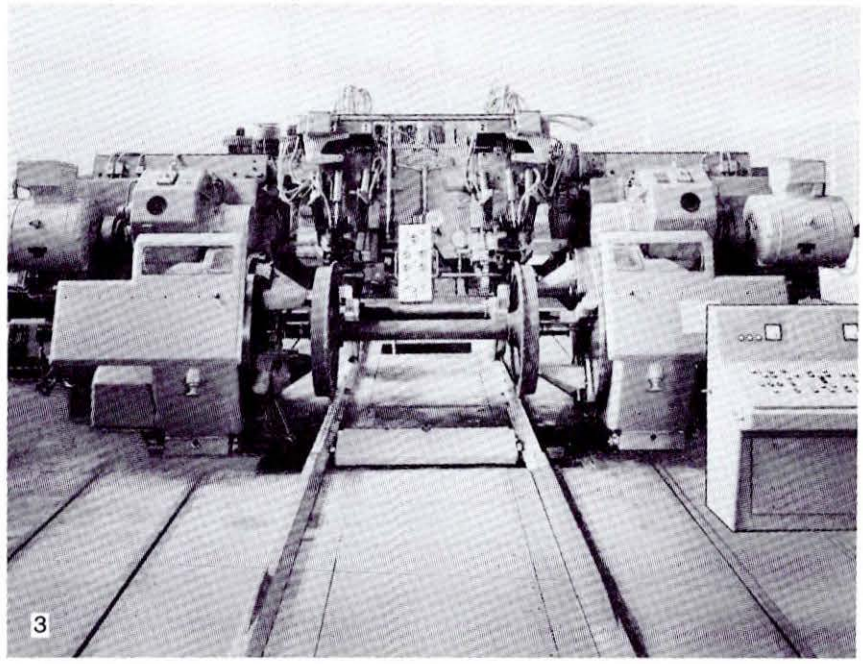

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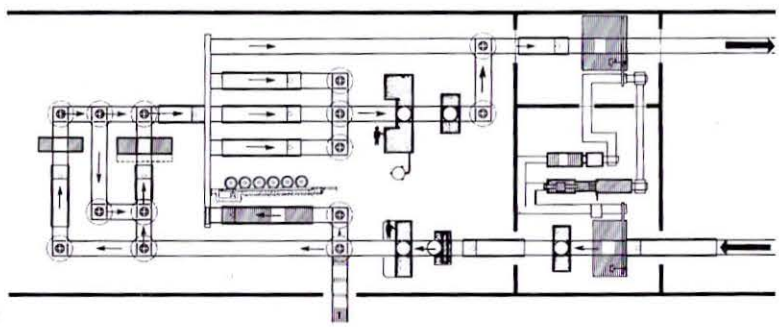
Our service includes the supply of complete wheel set reconditioning lines (Fig. 4) and single machines:

Type 165	–	Portal-Type Automatic Wheel Lathe (Fig. 3)
Type 166 + 173		Heavy Duty Wheel Lathe
Type 105	–	Underfloor Wheel Lathe (Fig. 5)
Type 263/1 + 2		Multi-Purpose Wheel Lathe
Type 353 p		Heavy Duty Wheel Rim Lathe with Burnishing Unit
Type 462	–	Heavy Duty Axle Journal Turning and Burnishing Machine
Type 411	–	Axle Journal Turning and Burnishing Machine
Type 563	–	Optical Measuring Machine for Wagon and Carriage Wheel Sets (Fig. 2)
Type 566	–	Bogie Measuring Machine
Type 567	–	Automatic Ultrasonic Wheel Set Crack Detecting Machine
Type 611	–	High-Pressure Cold Water Bogie Cleaning Equipment
Type 621	–	Automatic High-Pressure Cold Water Wheel Set Cleaning Equipment (Fig.1)
Type 631	–	High-Pressure Cold Water Cleaning Equipment for Axle Bearing Boxes
Type 641	–	Automatic High-Pressure Cold Water Roller Bearing Cleaning Equipment



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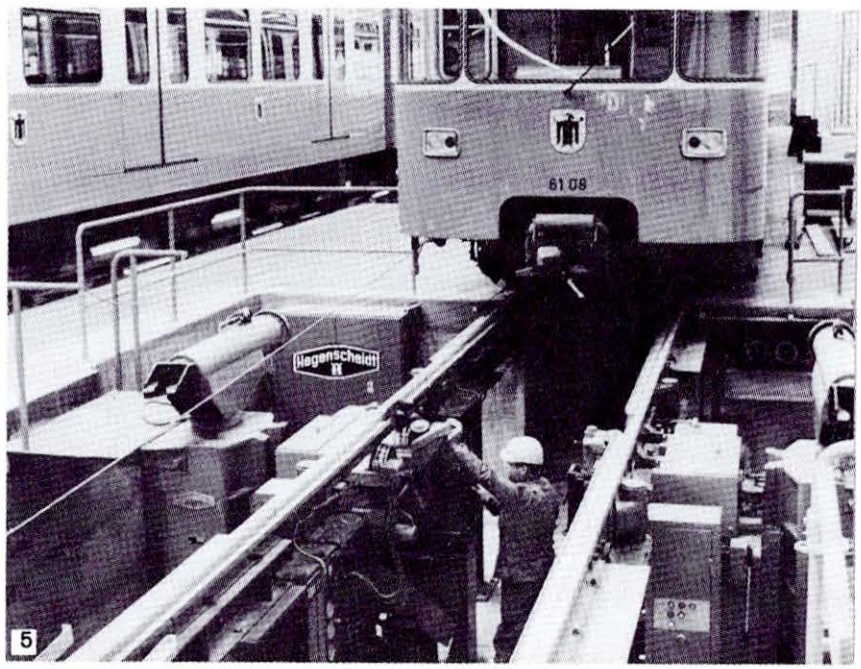

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How to blanket a market and save 37% in freight charges.

Try our intermodal "Pool Car" plan.

A Georgia blanket maker did. Bibb used to ship to Texas by truck. But Southern, working with Missouri Pacific, devised a pool car operation.

Individual orders were consolidated into one 17,000-lb., 9,121-blanket shipment to Dallas. There, they were broken down for distribution by truck throughout the Southwest.

Not only were freight costs 37% lower, with big savings passed on to Bibb's customers, but deliveries were 7 to 9 days faster.

So, Southern can make this blanket statement: we'll use the best strengths of rail *and* intermodal *to help you squeeze waste out of distribution.*

Southern Railway System, Washington, D.C.

Support the Surface Transportation Act: the help transportation needs to help you.

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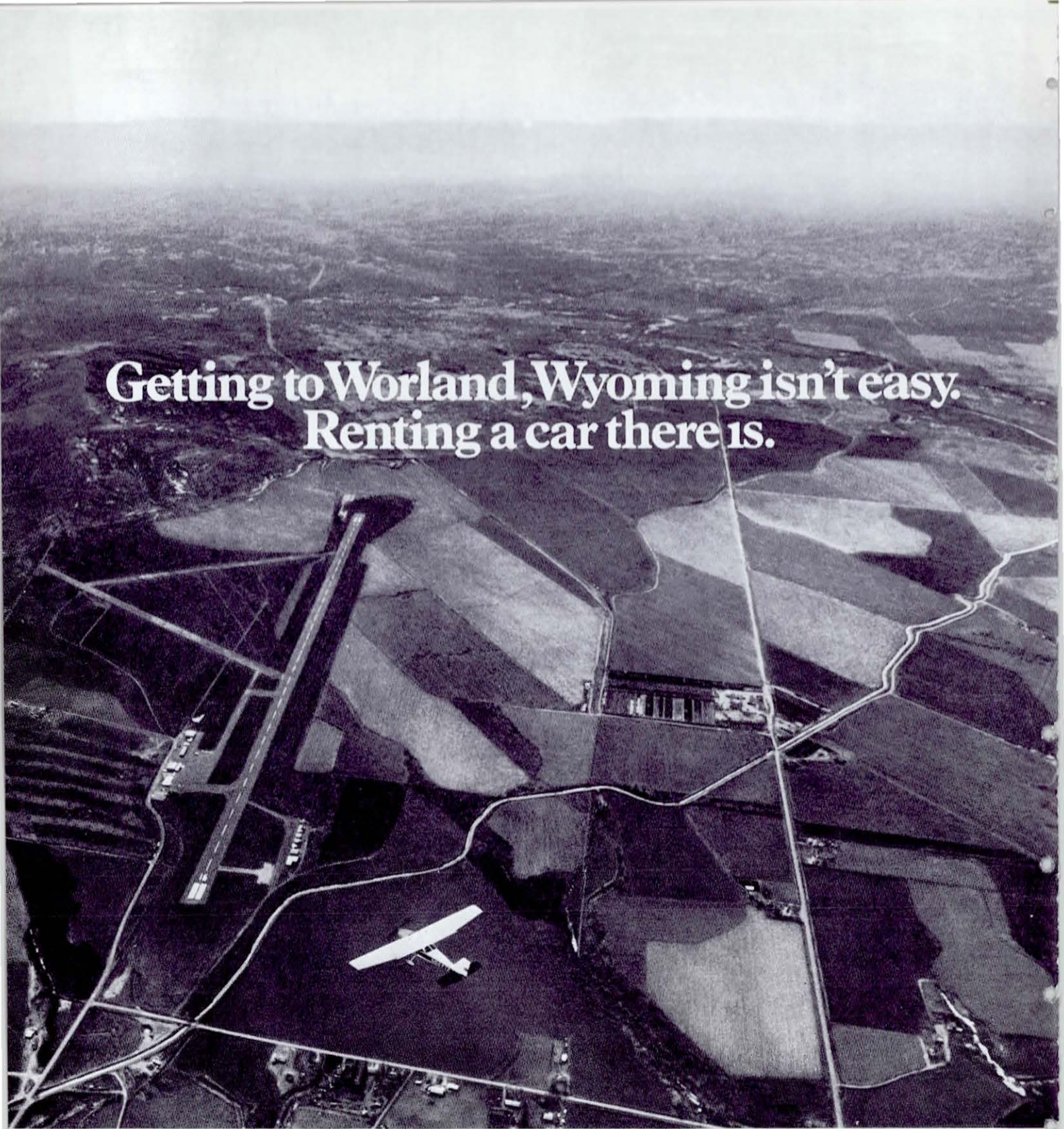
THE RAILWAY SYSTEM THAT GIVES A GREEN LIGHT TO INNOVATIONS



Way out west beside the banks of the Bighorn River, about midway between Basin and Thermopolis, is a place called National Car Rental.

It's there because Worland is there.

And the people who find their way to Worland need cars.

Just as the people who come to our rental counters in Waukesha and Wycoff and Wayzata need cars.

You see, all roads don't just lead to New York and Chicago and L.A.

So why should we rent cars just in New York and Chicago and L.A. and the like?

When you've got more new G.M. cars than anyone else in the world, you don't mind going out of your way for customers.

To reserve a fine new car at any of our 2400 worldwide locations call 800-328-4567 toll free* On rentals in the U.S., we thank you with S&H Green Stamps.†

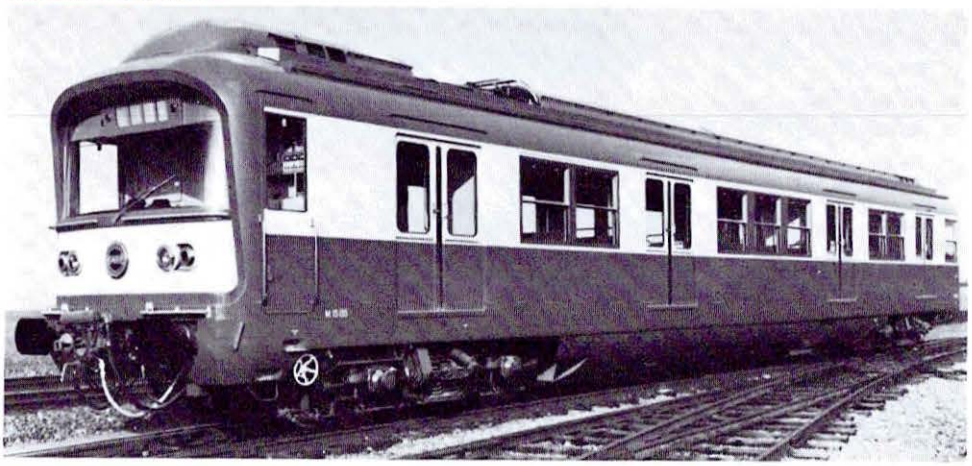
Take advantage of us.

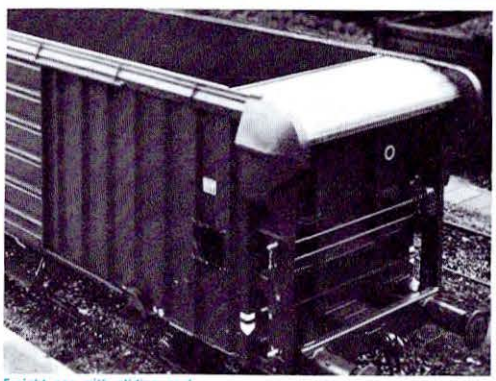
National Car Rental System (in Canada it's Tilden Rent-A-Car). * In Minnesota call 612-944-1234 collect. †Valid on U.S. rentals only except where prohibited by law. © National Car Rental System, Inc. 1972

a half century of experience in solving railway problems

CIMT LORRAINE

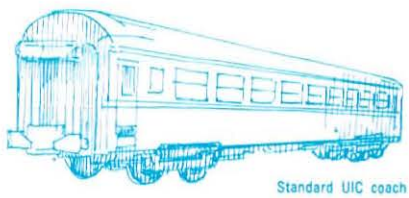
Motor coach for Urban Transit



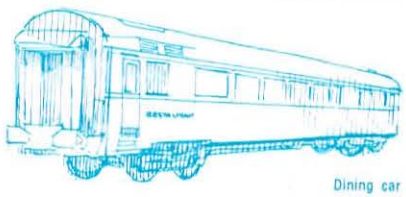


Freight car with sliding roof

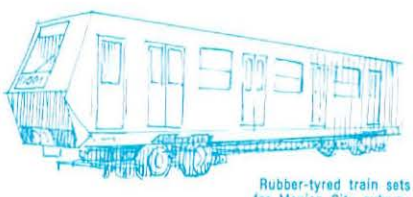
Heavy crew trolley



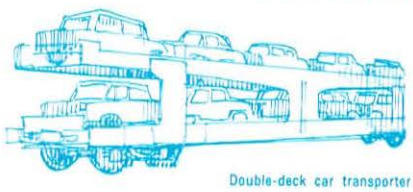
Standard UIC coach



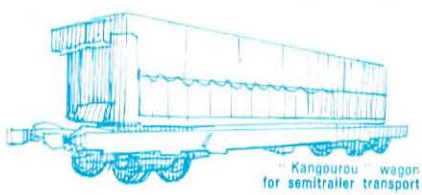
Dining car



Rubber-tyred train sets for Mexico City subway



Double-deck car transporter



Kangourou wagon for semitrailer transport

Design and construction of rolling stock has always been the foremost activity of CIMT LORRAINE.
In order to find the best solutions to today's transport problems in passenger movement and freight handling, CIMT LORRAINE has set up its own R & D department.

More than 100 types of special wagons, passenger coaches, crew trolleys and subway cars have been designed and built at our works. Now, several thousands of rolling stock units are in service with SNCF, RATP and overseas administrations.

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Circle 21 on coupon page 57

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We could not ask for your business without being sure of our ability to serve you across the country and across the border

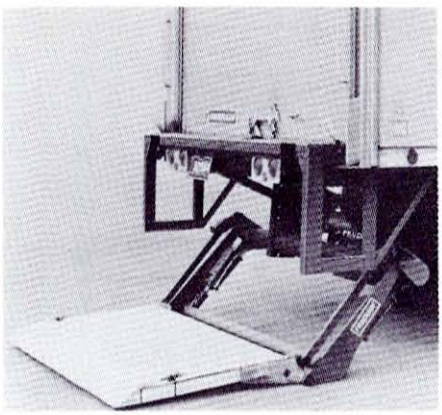
There is no substitute for direct, door-to-door motor freight service. In forty states, in Canada, and between the states and Canada, this is what we offer.

Wherever you see the CF emblem —Consolidated Freightways or Canadian Freightways—we want you to know that it stands for a consistent service at both ends of your shipping lanes. It means the latest in equipment, in standards of maintenance and safety, in communications, in terminal facilities.

More than anything, we hope CF means *service* to you. This is the goal we have set ourselves for the 'seventies. We ask for your business because we believe we are *the* motor carrier with the people and the places to serve you better.

CONSOLIDATED FREIGHTWAYS

New Products Report



Expanded line of hydraulic lift gates is announced

Fruehauf Corp.'s Fruehauf Division has expanded its line of hydraulic, undermount lift gates. The line, engineered to fit platform and van truck bodies as well as trailers, offers a wide selection of lift gate feature items. Among them are load limits ranging from 1,500- to 3,000-lb capacities, aluminum or steel platforms, gravity or power lowering equipment, single or dual hydraulic cylinders, battery or PTO driven systems, a wide variety of platform and ramp sizes, and beveled or conventional ramps. The photograph shows a 2,500-lb-capacity unit, equipped with aluminum platform and beveled ramp, mounted to a conventional semi-trailer.

Circle 60 on reader service card

Lightweight, self-adhering stringers can hold 7,000 pounds

Self-adhering stringers which permit shippers to achieve reductions in pallet costs, shipping weights and storage space have been announced by Willcox & Gibbs' Spur Division. The stringers are made of high-density polystyrene laminated to a specially treated reinforced paper skin with a super strength, pressure-sensitive adhesive on the surface. Measuring 48 inches long, 2½ inches wide and 4 inches high, the stringers will adhere to wood, paper, metal and plastic surfaces.

Most commonly used load configurations can be accommodated when stringers of a desired length are combined. After removing the protective paper from the adhesive, a packer can easily and quickly attach the stringer to the bottom of a shipping container such as a carton, a wirebound box and reels. The stringers, which can be used to form either two- or four-way fork-lift entry, will support weights up to 7,000 pounds. Three stringers, each 48 inches long, weigh only three pounds.

Circle 61 on reader service card

Hydraulic rolling base crane makes unloading a one-man job

A new hydraulic rolling base crane designed to be mounted to a truck or trailer bed has been introduced by National Crane Corp. With the crane, called "Rollin' Rascal," truck drivers can perform unloading, loading, hauling and lifting operations while selectively spotting trailer loads. The ultra-maneuverable machine, powered by a 14-hp gasoline-driven engine, can travel freely along the full length of a trailer or truck bed, even when fully loaded. It effectively converts a truck to an independent unloader-loader-hauler-trailer and frees the truck from dock, crane and lift truck operations. "Rollin' Rascal" offers up to 7-ton lifting capacity, has a standard 16½-foot reach, fully-protected hydraulic lines and no-drift 390-deg. rotation. It can be fitted with either standard base or remote controls.

Circle 62 on reader service card

Aluminum and steel alloy hoist can handle many types of jobs

A new hoist from the Wright Division of Acco has been designed for a variety of jobs. Lightweight and portable, the Model 04 Pull-A-Way C hoist is available in 3/4-, 1½-, 3- and 60-ton capacities. It weighs from 14 to 66 pounds. A positive-acting, spring-loaded, free-wheeling lever permits easy accessibility to the operator. The lever eliminates free-wheeling because it cannot be operated while the manually operated hoist is under load.

Made of aluminum and steel alloy, the hoist has a Weston-type, screw-actuated load brake which gives uniform brake surface pressure for more positive braking. Lever pull to move full loads is 60 pounds for 3/4-ton, 83 pounds for the 1½-ton, 84 pounds for the 3-ton, and 90 pounds for the 6-ton hoist. Lubrication of internal parts is not required in the field. Ball bearings in the 6-ton unit are pre-lubricated and sealed; all other bearings are self-oiling.

Circle 63 on reader service card

Transparent battery meets all railroad signal requirements

A modular, air-depolarized primary battery meeting all railroad signal re-

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quirements is available from the Carbon Products Division of Union Carbide Corp. A single-cell module—Ucar primary battery type UC 1—supplies a nominal voltage of 1.25 volts and a nominal capacity of 1,000 ampere hours. Series and/or parallel connection of two or three cells—type UC 2 and type UC 3—provides the range of operating flexibility needed in railroad signaling.

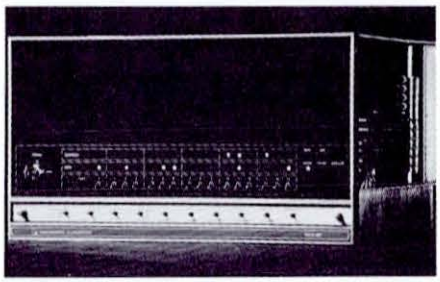
An entirely removable handle fits the transparent case, preserving the lid and cathode seals. An impact-resistance bonnet covers the carbon cathode to protect against the elements and shock and eliminates the customarily used tape cover. The hole-type exhaustion indicator is of the design used on Ucar jar type signal batteries.

Circle 64 on reader service card

Fiberglass battery boxes come in three sizes

Peterson Products railroad signal battery boxes are available in acid resistant fiberglass each equipped with a wood terminal trip, cable entrance chute (bottom entry), air vents, steel reinforced lock holes, and removable bottom liner. The battery boxes are available in three sizes (inside dimensions): 15in. x 20in. x 17in.; 20in. x 24in. x 17in. and 20in. x 28in. x 17in.

Circle 65 on reader service card



Minicomputer has 800 nanosecond cycle time

The Data General Corp. Nova 820 has a full memory cycle time of 800 nanoseconds, and executes arithmetic and logical instructions in a single 800-nanosecond cycle. It has a fully-parallel, 16-bit, multi-accumulator central processor.

The Nova 820 is built in a 10½-in-high chassis which can accommodate a full 32K of core memory, plus interfaces for multiple I/O devices. It also includes plug-in interfacing for commonly-specified peripheral configurations.

The basic price for the Nova 820 includes 4K 16-bit words of core memory, central processor, programmer's console, Teletype interface, high-speed direct memory access data channel, built-in external I/O cable connector, and automatic interrupt source identification. Automatic program load, power monitor and auto restart, and hardware multiply/divide are central processor options and require no additional printed circuit boards. A low-cost turnkey console is interchangeable with the programmer's console.

Circle 66 on reader service card

Data set operates at up to 1800 bps

The General DataComm Industries 202C/D multimodem data set is a medium-speed, asynchronous modem that provides for transmission of serial, binary data at up to 1200 bps over the switched network or up to 1800 bps over leased lines.

The set operates full duplex over 4-wire circuits or half-duplex over 2-wire circuits and is end-to-end compatible with the WECO 202C and 202D modems. A GDC 804-20 data auxiliary set is required for external control of the modem. The 202C/D is available as a 202C/D1 (without reverse channel) or as a 202C/D2 (with reverse channel). Both units are equipped with the complete test center function.

Circle 67 on reader service card

Wave analyzer separates signal into frequency units

The Hewlett-Packard model 302A wave analyzer separates a complex input signal into individual frequency components such as harmonic, intermodulation products, and other spectral components. By tuning the 302A across the spectrum, the components can be individually measured and evaluated. Frequency is read in Hz from the dial, and amplitude is read in volts, percent or dB from the meter.

The 302A is also an oscillator-tuned voltmeter combination. The oscillator output (BFO) and the analyzer's input tuning track together over the entire range of 20 Hz to 50 kHz and is controlled by the tuning dial.

Accurate, reliable measurements are assured by the 302A's automatic frequency control. The model 302A is provided with a frequency-restoring circuit allowing accurate frequency determinations for each waveform component. The restored frequency output is a sinusoidal signal which is exactly the same frequency as the signal component being measured. This output signal can be measured by an electronic counter to provide high resolution and accuracy. Amplitude of the restored frequency signal is proportional to meter deflection and is available when switched to either NORMAL or AFC modes.

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Who? *Someone you'd like to see get ahead!*
How? By his signing up for a one year study course to update his shop craft skills. Courses available include:

1-Year Skill Improvement Program for CARMEN: safety, car details, inspection, interchange rules;

1-Year Skill Improvement Program for MACHINISTS: locomotive inspection, wheels, air brake equipment, locomotive maintenance;

1-Year Skill Improvement Program for ELECTRICIANS: wiring diagrams, electronics, locomotive electrical maintenance.

Cost is $6.00 per month for twelve months ($72.00 total). Two lessons are sent each month. We send a progress report to the railroad on request. Upon satisfactory completion of the course, a diploma is issued.

Many other training programs are available and can be tailored to meet particular needs. Coupon will bring information.

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☐ Please enroll me in the _____ course. Here is my check for $6.00. I will pay $6.00 per month until the course has been completed ($72.00 total). I understand I may cancel at any time.

☐ Please send me more information on the _____ course.
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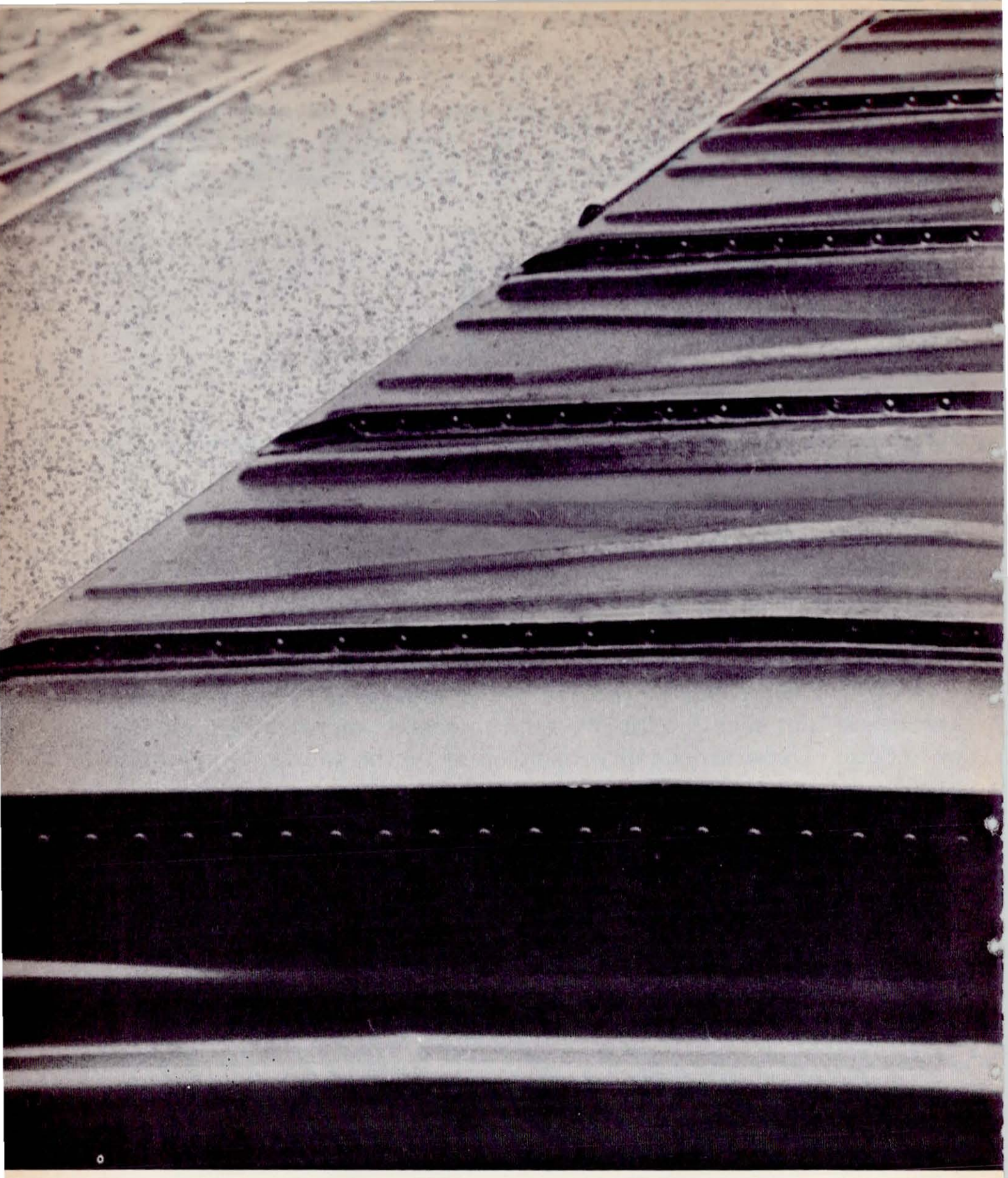
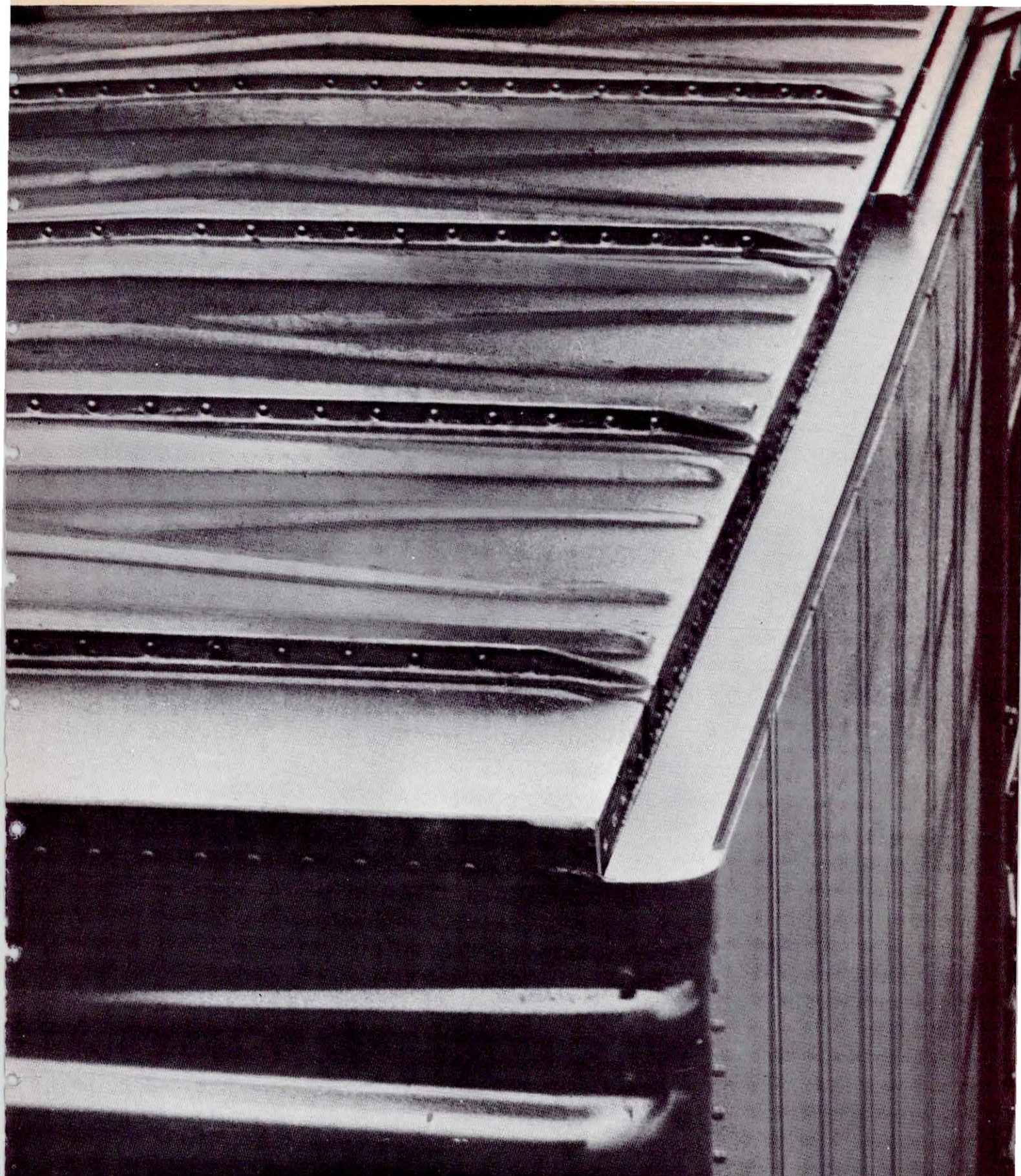


Stanray roofs handle a lot of stress with very little strain.



Stanray Box Car Roofs are subject to very little strain because the X-Panel (shown above) and the Diagonal Panel Roof are designed to resist the two greatest stresses—twisting and racking.

That's especially true of the X-Panel Roof with its 61½" panels instead of the normal 41". That means fewer panels to twist and move, and approximately 33% fewer seam caps, which means less chance of leakage. Installed by welding or riveting (your option).

Either the X-Panel or the Diagonal Panel Roof will provide maximum stress resistance and waterproof, dustproof protection for your lading. Provide longer life for your box cars, too.

Contact your Representative today and ask about the roofs that handle a lot of stress with very little strain.

STANRAY CORPORATION
STANDARD RAILWAY EQUIPMENT DIVISION
Hammond, Indiana • Chicago, Illinois
IN CANADA: Davanac Industries, Montreal, Quebec

Circle 23 on coupon page 57

Now your old locomotives can run as clean as today's new locomotives.

Our new 40-2 series locomotive engines have fuel injectors that cut smoke and hydrocarbon emissions in half, reduce carbon monoxide 21%. That's based on a "new part to new part" comparison. When you use this new injector with its low sac spray tip to replace an old one that's accumulated a lot of hours, the improvement is even greater.

Application of the 645 Model 1972 raised ring belt piston and 1972 wide port cylinder liner can achieve further reductions in smoke and emissions in 645 and 567 engines.

This means both 645 and 567 engines can be upgraded to virtually smokeless operation. And at the same time, have their injector spray tip service life almost doubled, thanks to the design and electrical discharge machining manufacturing methods used in the new spray tips.

How does this new tip work? The sac volume is reduced 53%, so there's less unburned fuel left in the combustion chamber. It's interchangeable with the original needle valve spray tips in all 567 and 645 needle valve injectors. So you can cut down on engine smoke, and extend injector service life, quickly and economically. Just place an injector unit exchange order at your nearest Electro-Motive branch.

GM
MARK OF EXCELLENCE

Electro-Motive Division
La Grange, Illinois

SOO
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LETTERS

Piggyback

Shaker Heights, Ohio

To the Editor:

Regarding the Oct. 30 issue of Railway Age, I'll agree that piggyback traffic is good traffic but only for those roads that have an intelligent knowledge of the net earnings generated by that traffic.

In your "Inside" column, you point out that in 1971 piggyback carloadings were 4.7% of total traffic while revenues were 5.7% of total, which you say explains ". . .why any improvement in piggyback traffic brings a very special glint to railroad eyes." But what portion of the total expense was incurred in obtaining that 5.7% of the revenues? I am sure that when the rental or ownership costs of extra long flat cars, and trailers (where incurred), the loading on and off cars, the special terminals, the drayage (where incurred), as well as the generally longer haul of piggyback traffic is considered, you will find that piggyback accounts for a lot more than 5.7% of total expense.

Furthermore, Robert D. Bartley's article boosts Plan I piggyback by saying one "intermodalist" likes the truckers' overflow traffic. I don't think this is too smart, for truckers' overflow traffic arises in times of excess traffic. Whenever a slump comes along the traffic dries up, and railroads will be caught with excess cars and terminals, the cost of which is likely to be loaded on other traffic, with a consequent driving away of that traffic.

The only sensible approach to piggyback is to concentrate it in those areas where rails have the inherent advantage, leaving to the trucks the business where they have the advantage.

Walter B. Wright,
Retired Director of Cost and Profit Margin Research, C&O/B&O

Electro-Motive anniversary

Newton, Kansas

To the Editor:

Railway Age effectively handled the occasion of EMD's 50th anniversary in a very interesting way (RA, Aug. 28, p. 21).

I am, however, disappointed that you find it necessary to understate the accomplishments of the steam locomotive.

On page 22, Gus Welty compares ton-miles and locomotive ownership in 1947 and 1971 with no mention of the drastic reduction in passenger train mileage from 414,909,000 in 1947 to 107,026,000 in 1969. (I do not have 1971 figures available but presume it would not exceed 80,000,000.) This reduction was accompanied by a similar reduction in the number of yard locomotives assigned to passenger terminal work. Average mileage per freight locomotive per day increased only 20%, from 122.8 in nearly all-steam 1944 to 146.8 in all-diesel 1961. Locomotive unit mileage is now reported to further distort any comparisons. On page 32, the Southern VP-Mechanical compares a CNO&TP freight run using a 5,400-hp four-unit FT diesel and a "5,000-hp potential" Mikado type. CNO&TP 2-8-2s could not develop in excess of 3,000 cylinder horsepower with their boiler pressure and dimensions. Such a comparison would be similar to running a test between a four-unit FT and a single-unit 3,000-hp GP40. 1948 tests on the Nickel Plate between Buffalo and Chicago proved a 2-8-4 of about 4,000 drawbar horsepower could make 10% faster over-the-road time than a 4,500-hp diesel with the same tonnage.

I submit that diesel accomplishments speak for themselves and it is not necessary to make grossly unfair comparisons with a machine that faithfully served the industry for a century and a quarter. . .

L.E. Stagner
Santa Fe Railway

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the overdue "machine"

The perfect answer for sanitary remote area toilet facilities -- for section crews, signal men, switchmen -- where conventional water toilets are impractical or impossible. Uses no water, chemicals or holding tanks. Operates on cool forced air venting and hygienic gas flame. Easily installs anywhere. Does not pollute the environment -- and isn't it about time?

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A LEADER IN PROTECTION OF THE NATURAL ENVIRONMENT.

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This is the shock absorber that's going to be on future super-speed mass transit. Subways. Monorails... Tomorrow.

This is also the shock—The Houdaille Hydraulic Rotary Shock Absorber—that's now on the Metroliner, the Turbo Train, and a lot of others that are revolutionizing mass transit. Today.

FUTURE SHOCK

And this is also the shock absorber that's got over 40 years of field experience, research and results. Like rugged, self-contained construction that shuts out dirt, dust, mud and water. And temperature valves that ensure uniform performance from -30° to 160°F.

The Houdaille Hydraulic Rotary Shock Absorber. It's better than yesterday's and it'll be even better tomorrow. In the future.

Hydraulics Division,
Houdaille Industries, Inc.
536 E. Delevan Ave., Buffalo,
New York 14211

HYDRAULICS HOUDAILLE

INDUSTRIAL TRAFFIC

(Continued from page 48)

James E. Bartley has been appointed executive vice president, and general manager, **National Industrial Traffic League**, New York, succeeding **Lester J. Dorr**, retired.

Ralph L. Andreas, director of purchasing and traffic, **American Oil Co.**, Chicago, will retire Jan. 1, after more than 16 years of service. He had previously served the railroad industry for 25 years, with the Illinois Central and Rutland.

Frank L. Sigloh, who left **Boise Cascoade Corp.** on July 15 as its director of transportation and distribution, has announced formation of a management consulting firm, **F.L. Sigloh & Associates**, specializing in transportation and distribution, in Suite 2, 1134 North Orchard Street, Boise, Idaho.

Jay A. Best has been named general traffic manager, purchasing and traffic department, **Koppers Co., Inc.**, Pittsburgh. He was formerly manager in international and marine services.

W.P. Hartis, Jr., traffic manager, **Deering Miliken, Inc.**, Spartanburg, S.C., has been promoted to manager of transportation, succeeding **M.R. Cornell**, retired. **G.D. Hedgpath, Jr.**, assistant traffic manager, promoted to traffic manager.

Frits ten Broeke, documentation manager, **Remington Rand International Division Sperry Rand Corp.**, Blue Bell, Pa., has been appointed manager of traffic/documentation. He will assume the responsibilities formerly handled by the late **Victor M. Morales**, traffic manager.

Thomas V. Lomen has been appointed transportation manager, C-E Tyler Division, **Combustion Engineering, Inc.**, Valley View, Ohio. He was formerly traffic manager, White Trucks Division, White Motor Corp.

W.J. Mayfield has been appointed traffic manager, **Central Foundry Co.**, Tuscaloosa, Ala.

John F. Flynn has been appointed general traffic manager for photo, chemicals and office systems products, **GAF Corp.**, New York succeeding **John B. Sondey**, named technical associate—traffic.

Wallace D. Teich has been named a senior associate of **Walter Frederick Friedman and Co.**, a New York physical distribution management consulting firm.

W.G. Renard has been elected vice president-transportation, **Fort Howard Paper Co.**, Green Bay, Wis. He also will retain the position of vice president-purchasing.

Alan L. Schmidt, traffic and transportation analyst, **Richardson Co.**, Melrose Park, Ill., has been promoted to senior traffic and transportation analyst.

John J. Wojnar has been promoted to manager-distribution services, Electrochemical and Specialty Chemicals Division, Chemicals and Plastics Group, **Hooker Chemcial Corp.**, Niagra Falls, N.Y.

SUPPLY TRADE

Paul G. Fegley has been appointed manager, railroad product sales, **Westinghouse Air Brake Division** of **WABCO**, Wilmerding, Pa. **Frank Panetta** has been named manager, price section, and **Arthur M. Warren**, manager, parts and repair sales.

James R. Egan has been appointed vice president-sales and operations, **Republic Car Line Inc.**, New York, succeeding **J.W. Collyer**, retired.

Neale J. Riely has joined **Georgia-Pacific Corp.**, Stamford Conn., as an assistant to **Harold J. Slavin**, manager rail service. Mr. Riely spent two years as an operations management trainee with the **Penn Central** at Philadelphia and New York.

The following have been named manufacturer's representatives, for railroad car parts **Amcar division, ACF Industries: Hughes Railway supplies, Inc.**, Philadelphia, through **Frank W. Hughes; R.J. Hughes Equipment, Inc.**, Chicago, through **Robert J. Hughes**; and

FOR SALE

Lot— Single track railroad bridge of 120' span c-c of bearings. Bridge is of the through girder type with two riveted main girders designed for Cooper E-90 loading at 125% stress. Floor beams are 22'-3" long with provision for walkway alongside the track.
Total weight: 161 tons
Weight girders: approximately 47 tons and 53 tons

Lot— Double track, skewed railroad bridge of 120' span c-c of bearings. Bridge is of the through girder type with three riveted main girders designed for Cooper E-90 loading at 125% stress. Floor beams are 27'-0" long with provision for two walkways and 22'-5" long with provision for one walkway alongside the track.
Total weight: 324 tons
Weight girders: approximately 50 tons, 69 tons, and 52 tons

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Cardinal Supply & Manufacturing Co., Omaha, Neb., through **Joseph F. Lysaught.**

Robert P. Jensen has been elected president and chief operating officer, **General Cable Co.,** New York, effective Jan. 1, 1973. He was also elected a director and member of the Executive Committee. Mr. Jensen will succeed **A.L. Fergenson** as president and Mr. Fergenson will continue as chairman of the board and chief executive officer. Mr. Jensen was formerly president of Howmet Corp. and will serve as an advisor to Howmet for the balance of 1972.

Gerald R. Gonyer has been named vice president and manager, metalworking machinery, **Farrel Co.,** Rochester, N.Y. He will direct the sales and engineering activities for machine tools, metal extrusion presses and railroad shop equipment.

John R. Wilmot has joined **Wyer, Dick & Co.** Newark, N.J., as an assistant vice president. Mr. Wilmot previously served with Coverdale & Colpitts, Inc.

John Southworth has been appointed product manager for container refrigeration equipment, **Carrier-Transicold Co.,** a division of Carrier Corp.

Stanley D. Christianson, vice president-treasurer, **Thrall Car Manufacturing Co.,** Chicago Heights, Ill., has been promoted to vice president finance.

Peter Brandt has been promoted to manager of manufacturing engineering, Chicago Heights.

Seatrain Lines has announced formation of **Seatrain Canada, Ltd.,** with offices at Commerce House, 1080 Beaver Hall Hill, Montreal, under direction of **Cliff Thacker,** director of marketing-Canada.

W.H. Miner Division, Miner Enterprises, Inc., has moved its executive and sales offices to 1001 East 87th Street, Chicago, Ill. 60619. Telephone: (312) 374-7400.

Kerry E. Stokes has been appointed sales engineer, **Pullman Transport Leasing Co.,** subsidiary of Pullman Incorporated, at Chicago. Mr. Stokes was formerly employed by the Pullman-Standard division.

Stuart T. Saunders, former chairman, **Penn Central,** has been retained by **Wheat, First Securities Inc.,** a Richmond, Va., investment banking firm, to study energy requirements, particularly as the coal industry is affected.

All electronic and railroad products of the former **Barco Division** of **Aeroquip Corp.** will be handled by **Barco Electronics,** a separate organization within the newly-created **AMB Division. George W. Koopman,** general marketing manager of the former **Barco Division,** named general manager to head this new organization.

J.D. Case, who retired Aug. 31 as superintendent-field welding, **Penn Central,** has joined **Frank Speno Railroad Ballast Cleaning Co.** as sales engineer.

William R. Cress has been elected executive vice president, **Ohio Brass Co.,** Mansfield, Ohio.

(Continued on page 72)

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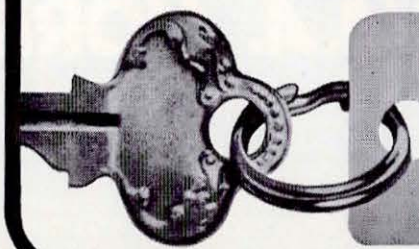

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Circle 30 on coupon page 57

Market Outlook

CARLOADINGS

Loadings of revenue freight in the week ended Nov. 11 totaled 540,776 cars, according to the Association of American Railroads. This was a decrease of 9,318 cars, or 1.7%, compared with the previous week, and an increase of 96,069 cars, or 21.6%, compared with the corresponding week last year. Ton-miles generated by carloadings in the week ended Nov. 11 are estimated at 16.4 billion, an increase of 19.8% above the corresponding week of 1971.

REVENUE FREIGHT CARLOADINGS

Commodity	Nov. 11 week	Nov. 4 week
Grain	30,832	31,305
Farm products	20,338	19,604
Metallic ores	38,281	39,409
Coal	89,982	92,783
Crushed stone, gravel & sand	27,777	28,286
Nonmetallic minerals	9,870	9,741
Grain mill products	19,881	19,940
Food and kindred products	25,522	26,259
Primary forest products	24,215	23,883
Lumber & wood products (except furniture)	17,356	17,989
Pulp, paper & allied products	23,124	23,874
Chemicals & allied products	26,389	25,835
Petroleum products	9,369	9,123
Stone, clay & glass products	21,153	20,840
Coke	7,772	7,810
Metals & products	23,570	26,246
Motor vehicles & equipment	27,951	27,788
Waste & scrap materials	16,089	15,831
Forwarder & shipper assn. traffic	7,396	7,523
All other carloads	73,451	75,514
LCL traffic	458	511
Total cars loaded	**540,776**	**550,094**
Cumulative total 45 weeks	1972	1971
	22,654,311	22,139,210
Estimated revenue ton-miles (billions) 45 weeks	681.8	644.4

PIGGYBACK LOADINGS

U.S. piggyback loadings for the week ended Nov. 4 totaled 29,940 cars (17.7% above the corresponding week last year) and 51,931 trailers or containers (up 21.9% from 1971). The figures for both cars and trailers or containers represent all-time highs for one week. Cumulative volume for the first 44 weeks of 1972 is 1,120,160 cars (up 10.1% from last year) and 1,889,456 trailers or containers (up 13.3% from 1971).

IN CANADA

10 days ending	Tons of Revenue Freight	Cumulative Totals
Oct. 31, 1972	6,558,038	174,204,224
Oct. 31, 1971	6,191,742	177,101,793

CAPITAL EXPENDITURES

● *Santa Fe.*—The 1973 capital program for rolling stock will total $72 million. Included will be acquisition of 64 3,600-hp diesel units and 1,431 new freight cars, including 1,100 cars which were previously announced (RA, Sept. 11, p. 99); rebuilding of 103 locomotive units and conversion/modernization of 1,157 freight cars. Forty-three of the new diesels have been ordered from Electro-Motive, 21 from General Electric; all will be equipped with cab air conditioning.

FREIGHT-TRAIN CARS

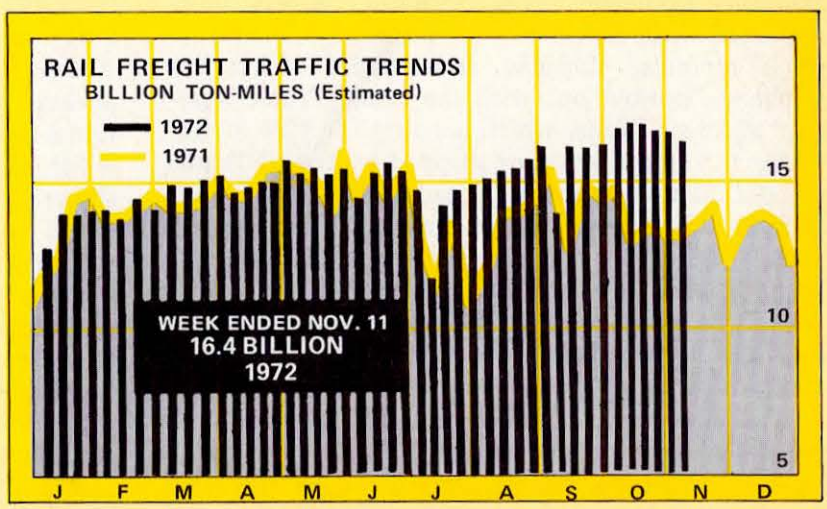
● *Southern.*—Ordered 400 new freight cars costing about $9 million; deliveries are to start in the first quarter of 1973. ACF will build 200 all-purpose, 70-ton, 89-ft 4 in. flat cars; Greenville Steel Car will build 200 100-ton bulkhead flat cars, of which 100 will be 61 ft long and 100 will be 50 ft long.

NEW FACILITIES

● *Missouri Pacific-Texas & Pacific.*—Ordered four total radio control (TRC) systems from Union Switch & Signal. (The TRC system is a multiple radio station remote control which permits instant communication between dispatcher and train via a railroad's conventional communication facilities.) Included in the order are four dispatcher systems operating 26 field stations. MoPac equipment will be installed along the main line between St. Louis and Little Rock. T&P's equipment will be installed in east Texas and Louisiana.

SPECIAL

● *Canadian National.*—Ordered 122 mobile housing units for its employees working in remote sections of Canada. Atco (Quebec) will be building the units at a cost of $800,000 with deliveries scheduled for the first quarter of 1973. The 10- by 34-foot units may be mounted on flat cars and can be off-loaded on wheels for highway movement. This order brings CN's acquisitions of mobile housing to 1,000 units over the past five years.



Source: Association of American Railroads

Moving Freight

NATIONAL FREIGHT-CAR POOL STUDIED

ACF Industries President Henry A. Correa says he has been working "with others in the industry to develop a private National Freight Car Pool." Correa told the Stanford Business School Association in Palo Alto, Calif., on Oct. 26: "This pool would allow cars, as needed, to pass from one pool member to another without requiring railroads in weaker financial condition to make investments they can ill afford, or financially strong roads to make investments for rolling stock on a marginal or short-lived movement. The main reason it has been difficult to develop such a pool privately is that per diem rates have not been sufficient to attract the private capital necessary to accomplish such an objective. These per diem rates are about to be increased, however. Such increases should be helpful in attracting private capital, provided equity owners in the pool can give proper assurances that they will keep the cars busy."

CP MAY HAUL TORONTO GARBAGE

CP Rail has gotten an initial go-ahead for moving a quarter of the unprocessed garbage of Metropolitan Toronto to an undisclosed site within 150 miles north of the city at a rate of $6.40 per ton. Toronto Metro's Executive Committee has cleared the CP proposal rather than one made by Canadian National which, at higher cost, would process the garbage into blocks prior to shipment and would then use them for land fill closer to the city. Either road is prepared to handle 1,600 tons of unprocessed garbage daily and final decision will be up to the new Metro Council next year.

RAILS HELP SPEED BEANS TO EUROPE

Edward R. Powell, vice president of the Michigan Elevator Exchange, says Michigan farmers have improved their export market position as the result of a container shipping arrangement which the Exchange worked out with the Grand Trunk Western. Michigan beans, which account for 42% of the entire U.S. crop, are now shipped by Grand Trunk in 40,000-pound-capacity containers direct from Saginaw to port cities for loading aboard ocean-going vessels. Prior rail rates allowed for only bagged beans loaded in box cars. For bean growers, says Powell, the containerization program means reduced handling costs, faster deliveries, and a bigger European market.

SCL RUNS 'EM FAST AND THROUGH

Two new services are expediting freight for Seaboard Coast Line customers. In conjunction with Richmond, Fredericksburg & Potomac, SCL has cut 3 hours and 45 minutes from the schedule of its all-piggyback train between Potomac Yard, Va., and Jacksonville, Fla., so it makes its daily 750-mile run between 7:30 a.m. and 11:59 p.m. the same day. The train connects with a Penn Central Trailvan service and with the Jersey Central/Reading/Baltimore & Ohio "Florida Jet" to give second day delivery from the New York metropolitan area. SCL reports its piggyback traffic is up 21% over last year. All types of traffic are handled in a new run-through service in both directions between Jacksonville and Houston, Tex., in conjunction with Louisville & Nashville and Missouri Pacific. The new trains double the daily run-through service over the route which SCL says has been necessary because traffic now exceeds the capacity of a single train.

"OPERATION SCATBACK" FOR MP SHIPMENTS

Missouri Pacific is under way with a new small-shipments program—Operation Scatback—which Charles T. Groton, Jr., describes as "much more than a new promotion gimmick for an old product. We've made substantial improvements to the product." Groton, president of MoPac's trucking subsidiaries and general manager-merchandise freight, cites these improvements: (1) Added schedules to and from online points which provide the heaviest LTL/LCL tonnage; (2) improved schedules, with transit time reduced in many instances by a day or more; (3) establishment of a shipments-monitoring system which has brought substantial improvement in on-time performance; and (4) creation of a high-speed billing system at major terminals which has reduced billing time by as much as 50%.

PACKAGES BY PASSENGER TRAIN

Once there was Railway Express. . .and before that Adams Express and Wells Fargo. Now it is Amtrak package express service on Metroliners and conventional trains between New York and Washington which is reintroducing expedited handling of small shipments by passenger train. Amtrak has established express check-in counters and parking for messengers at New York's Penn Station and Washington's Union Station where small packages are received up to 15 minutes prior to train departure. Guaranteed delivery at the other terminal is within five hours via Metroliner and, a lower rate, within seven hours when handled on conventional trains. Amtrak backs up delivery guarantee with promise that next shipment will move free if these times are not met.

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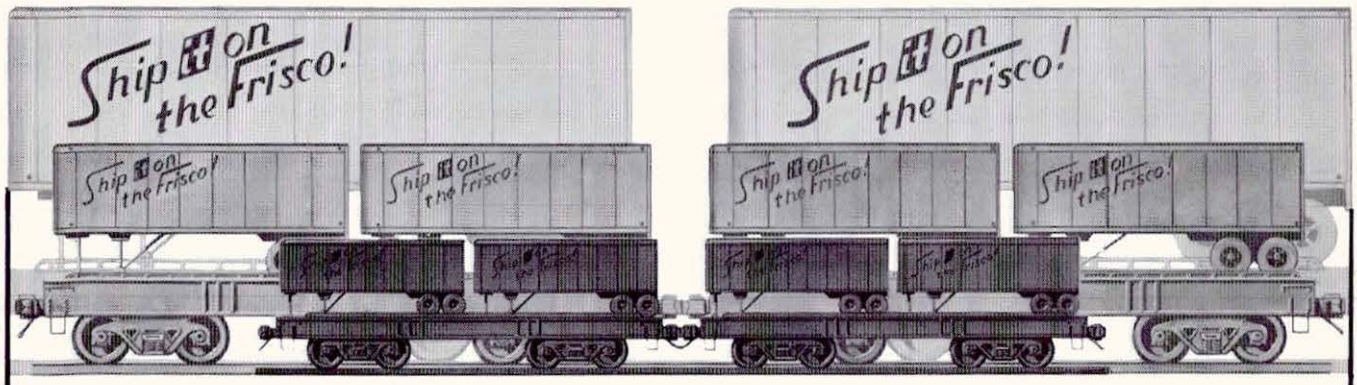

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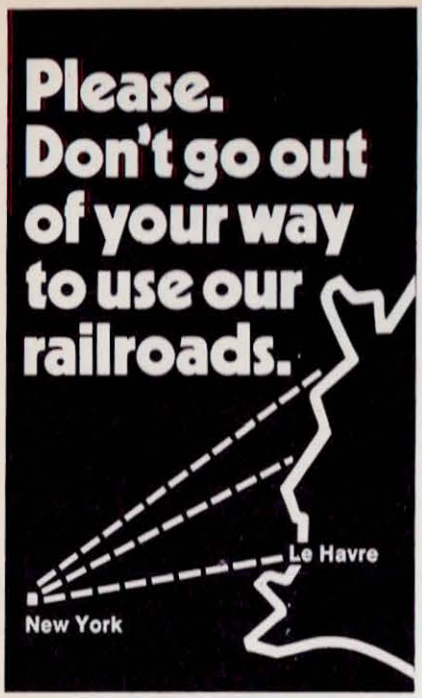

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Containerized freight consigned to Le Havre is on the railroads to your markets in Europe (at 70 miles an hour) while freight consigned to other major ports is still at sea.

The containerized freight handling facilities at Le Havre are now among the best in Europe. In fact they are so advanced that we can guarantee scheduled shipment of your freight to the consignee anywhere in Europe.

The freight trains are waiting at the dock. Equipped to handle any size containers. And your shipment goes direct from the boat to the train. With no lost dock time.

From Le Havre, the French National Railroad's track network fans out to Europe. Within hours your goods are in Paris—Lyons—Geneva—Munich—Zurich. Anywhere in Europe where there's railroad track. And our freight trains are prompt, punctual and dependable. This means efficient and economical service to you and your customers.

So don't go out of your way to use our railroads and get your goods to market faster.

For further information write to the French National Railroads 610 5th Ave., N.Y. New York Freight Department F. Or call French National Railroads at (212) 582-2110.

French National Railroads

Circle 31 on coupon page 57

(Continued from page 67)

Dr. Martin Wohl, director of transportation studies for the **Urban Institute,** Washington, D.C., has been named professor of transportation system planning, **Carnegie-Mellon University,** Pittsburgh, Pa.

Brammall, Inc., has formed a Cargo Security Equipment Division at Angola, Ind., to develop, manufacture, and market anti-pilferage and shipment devices for the railroad and transportation industries.

Fred Coleman, formerly with the U.S. Maritime Administration, has joined the staff of **Computer Industries Corp.** as vice president, government relations, Westwood, Mass. **James T. Regan,** formerly with USM Corp., has joined Computer Identics as vice president and treasurer.

Charles E. Mara, Jr., formerly with **GTE-Information Systems,** has joined the Industrial Systems Group, **Computer Identics Corp.** as marketing engineer, Westwood, Mass. **Thomas C. Lagaly,** formerly with the Kroger Co., Cincinnati has been named marketing engineer, Industrial Systems Group, Computer Identics Corp., Cincinnati.

OBITUARY

Oliver R. Anderson, 69, retired regional manager of sales, **Milwaukee,** Seattle, died there Nov. 13.

Ernest J. Carr, Sr., 76, retired vice president-traffic, **Illinois Central,** died Nov. 10 in West Palm Beach, Fla.

Marvin A. Daut, 54, vice president of purchasing, **International Car Co.,** Kenton, Ohio, died of an apparent heart attack Oct. 27.

Howard C. Forman, retired assistant to president, **Louisville & Nashville,** died Oct. 29 at Louisville.

Wilbur S. Scholl, director of personnel, **Louisville & Nashville,** died Oct. 29 at Louisville.

Harold J. Wales, 46, manager, personnel training, mechanical department, **Burlington Northern,** died Oct. 13.

DIVIDENDS DECLARED

BURLINGTON NORTHERN.—5½% Preferred, 13¾ cents, quarterly, payable Dec. 30, to holders of record Dec. 8.

CHESAPEAKE & OHIO.—75 cents, paid Sept. 20 to holders of record Sept. 1.

KANSAS CITY SOUTHERN.—50 cents, quarterly, paid Sept. 16 to holders of record Aug. 31; 4% Preferred, 25 cents, quarterly, paid Oct. 16 to holders of record Sept. 29.

MISSOURI PACIFIC.—Class A, $1.25, quarterly, paid Sept. 29 to holders of record Sept. 18.

NEW YORK & HARLEM.—$2.50, semiannual, paid Sept. 26 to holders of record Sept. 15.

NORFOLK & WESTERN.—$1.25, quarterly, payable Dec. 11, to holders of record Nov. 9.

PITTSBURGH & LAKE ERIE.—$1.50, paid Oct. 16 to holders of record Sept. 29.

PITTSBURGH & WEST VIRGINIA.—14 cents, quarterly; 1½ cents, extra, both payable Dec. 26 to holders of record Dec. 4.

RICHMOND, FREDERICKSBURG & POTOMAC.—$2.25, quarterly; 6% and 7% Gtd. stock, $2.25, all paid Nov. 1 to holders of record Oct. 16.

ST. LOUIS-SAN FRANCISCO.—62½ cents, quarterly, payable Dec. 15 to holders of record Dec. 1.

SOUTHERN.—40 cents, quarterly; 6 cents, extra, both payable Dec. 15 to holders of record Nov. 15.

WHEELING & LAKE ERIE.—$1.43 3/4, quarterly, paid Nov. 1 to holders of record Oct. 13.

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The Authority reserves the right to accept the proposals most advantageous to it and wave informalities in or to reject any and all proposals, as it may determine in its sole and absolute discretion.

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Viewpoint

A massive challenge for p.r. and ad men

Amtrak recently paid Louis Harris and Associates $200,000 for an exhaustive public-opinion survey designed to uncover public attitudes about passenger-train service. Insofar as they related to Amtrak, the Harris findings have now been widely publicized (RA, Oct. 6, p. 39). But in the course of interviewing 3,000 households on the broad questions of passenger service, Louis Harris and Associates also explored public attitudes about railroads in general; those findings, reproduced in the table on this page, have been less widely publicized. They show the railroads to have a public image badly in need of some expert polishing.

Word profile of the railroad industry

	Total %
POSITIVE	
Public spirited	9
Highly competitive	8
Modern and progressive	8
Forward looking management	7
Good financial investment	6
High quality of products and services	6
Good labor relations	6
NEGATIVE	
Out of date	34
Backward management	28
Not good financial investment	21
Poor labor relations	20
Poor quality of goods and services	20
Cold and impersonal	15
Get together to fix prices	8
No phrase applies	2
Not sure	20

Almost simultaneously with release of the Harris poll—though it wasn't planned that way—the Association of American Railroads, which had budgeted $3.1 million for image-building advertising in 1972 but actually spent less than $1 million, decided to cancel its national ad program completely for 1973. The explanation which AAR President Stephen Ailes gave of this action was characteristically sensible and practical: It was all a question of priorities, said Ailes; the AAR thought it had better spend its available money improving the product (through increased expenditures for research and development, and creating a centralized computer system) rather than in advertising it (RA, Oct. 30, p. 10). At the same time, Ailes announced what amounted to a downgrading of the public relations function at the AAR. He emphasized that the AAR's position was not one of no-confidence in either the advertising or public relations functions; rather, he said, it was felt that both jobs could better be done by individual railroads.

The challenge that the AAR has thus tossed to railroad public relations and ad men is a massive one, but not impossible. Railroad p.r. men amply demonstrated, in their skillful handling of the Astro "grass roots campaign," their ability to win a sympathetic hearing for railroads.

As for advertising, a number of railroads have been more or less consistently doing a good job, some more consistently than others: the Southern, the Burlington Northern, Santa Fe, Seaboard Coast Line, Southern Pacific, Union Pacific, Missouri Pacific, Kansas City Southern, Rio Grande, Frisco, Penn Central, Milwaukee, Chessie System, Rock Island, Illinois Central Gulf. But some railroads don't do the job at all; and many that do, don't do it often enough.

In their present p.r. and ad forces, most railroads have the brains to fill the gap left by the AAR's retrenchment. But what are brains without budgets? Not enough railroads are putting the two together.

When you put your highway trailers and containers on Kansas City Southern, you can sit back and relax. Excellent piggyback facilities at seventeen points between Kansas City and New Orleans will make the trailer/container piggyback transition smoothly and quickly.

To keep your inventories on the move and our deliveries on time.

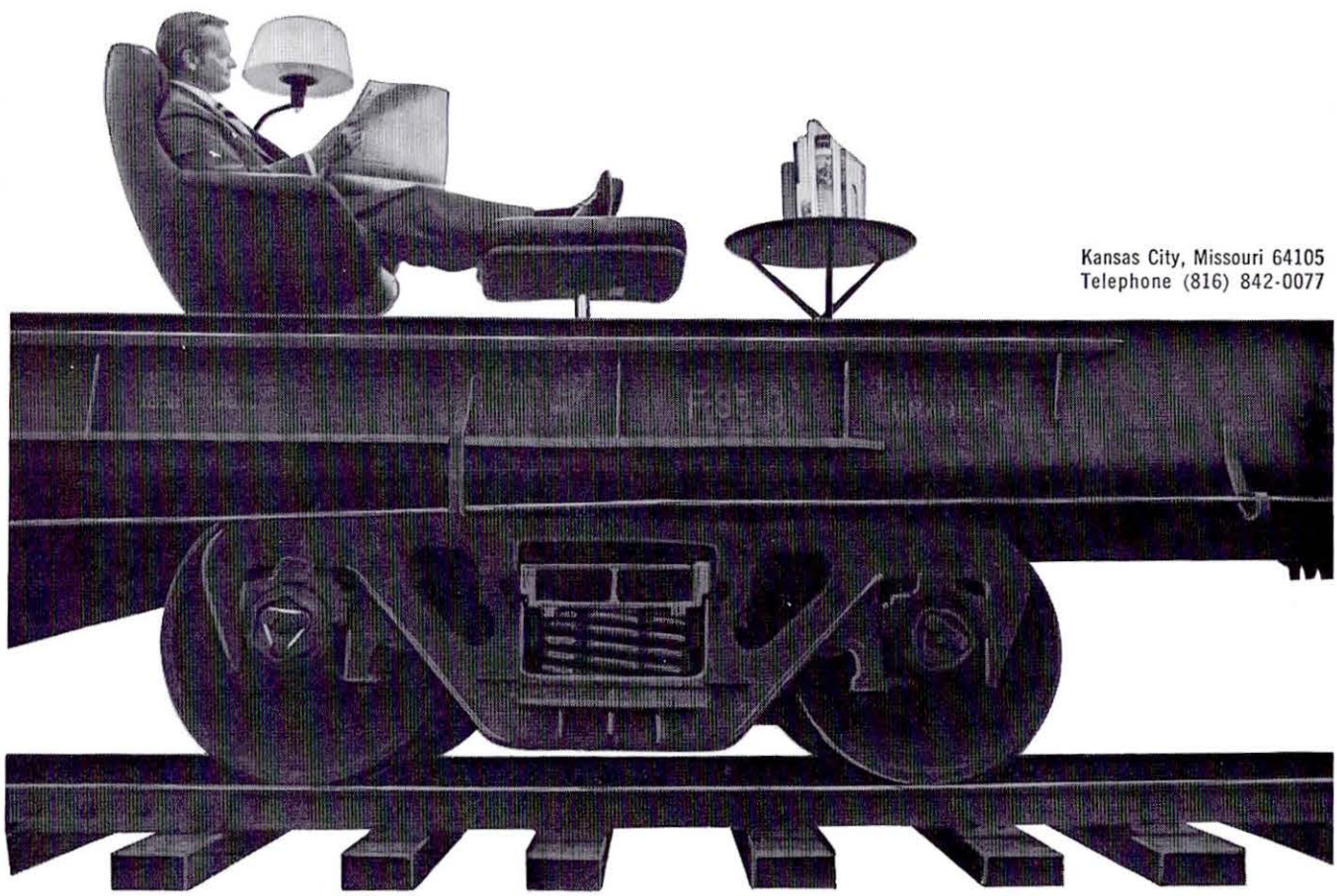
FLAT TO LET

Kansas City Southern can take your product to market faster via piggyback facilities in Missouri, Kansas, Arkansas, Louisiana, Texas.

In Kansas City, Pittsburg, Joplin, Neosho, Siloam Springs, Fort Smith, Texarkana, Shreveport, Beaumont-Port Arthur, Lake Charles, Greenville, Dallas, Minden, Alexandria, Baton Rouge, Gramercy, and New Orleans.

KANSAS CITY SOUTHERN *Lines*

the uncommon carrier



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Japan to U.S.Gulf Ports–

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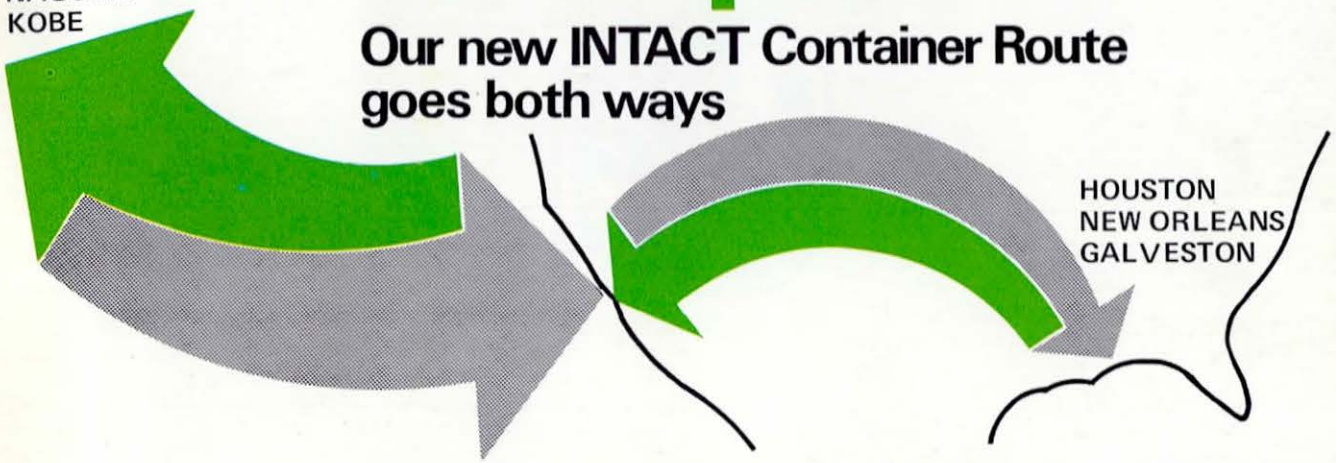
Our new INTACT Container Route goes both ways



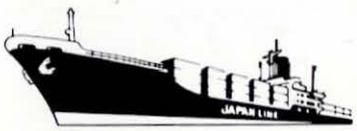
There's a lot to be said for our new Mini-Land Bridge service. Your containers speed from Japan per ship to the West Coast, from where they proceed – "intact" – by unit train to their final destination on the Gulf or East coast. The other way around it works as well. Combined transit time is faster than direct sea service. And prices are competitive.

To assure prompt service at five days interval on our California route. We've added a new 29,000-DWT full-container vessel, the "Silver Arrow", to our fleet. She crosses the Pacific in a short nine days. On the Pacific Northwest route, a vessel leaves every ten days.

Now we can offer faster and more frequent service than ever before.

Mini-Land Bridge service is also offered between Japan and U.S. North Atlantic Ports.

Give us a try. On any route. We promise efficiency. And we always live up to what we promise.



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